



THE

AMERICAN PRACTICE OF MEDICINE;

BEING

A T R E A T I S E

ON THE

CHARACTER, CAUSES, SYMPTOMS, MORBID APPEARANCES,

AND

T R E A T M E N T

OF THE

DISEASES OF MEN, WOMEN, AND CHILDREN,

OF ALL CLIMATES,

ON

VEGETABLE OR BOTANICAL PRINCIPLES:

AS TAUGHT AT

The Reformed Medical Colleges in the United States:

CONTAINING ALSO A

TREATISE ON MATERIA MEDICA AND PHARMACY,

OR THE

VARIOUS ARTICLES PRESCRIBED, THEIR DESCRIPTION, HISTORY, PROPERTIES, PREPARATION, AND USES;

WITH AN APPENDIX, ON THE CHOLERA, ETC.

ILLUSTRATED BY NUMEROUS PLATES AND CASES.

THE WHOLE PRECEDED BY

P R A C T I C A L R U L E S

FOR THE

PREVENTION OF DISEASE AND THE PRESERVATION OF HEALTH.

BY W. BEACH, M.D.

President of the Reformed Medical Society, and Founder of the Reformed Medical Colleges of the United States; Licentiate of the Medical Society of the State of New York; Member of the Medical Society of the City and County of New York; Professor of Materia Medica, Pharmacy, Theory and Practice of Physic and Surgery in the New-York Reformed Medical College, and Principal Physician and Surgeon of the United States Infirmary.

IN THREE VOLUMES.....VOLUME I

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W. BEACH, M.D.

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District of New York.

New-York, Nov. 1832.

DOCTOR W. BEACH;

Dear Sir,

I have great pleasure in stating the favorable opinion I entertain of the merits of your work, and I hope that the public will appreciate its value, and your talents.

I am confident that your system of practice will be read with pleasure by many of the most distinguished physicians in Europe, and that it will be found worthy of translation into other languages.

I congratulate you, dear sir; in having produced such a valuable stock of medical science; on a reformed or improved plan.

I hope that the work may contribute something more to your advantage than is generally the bare reward of learning and literary labours; and I feel a presage that your diligence, judgment, and erudition, will be properly appreciated and rewarded by a discerning and enlightened community.

I am truly yours,

J. F. DANIEL LOBSTEIN, M. D.

Of the Medical Faculty of Paris; late Physician of the Military Hospital and Army of France; Professor of Surgery and Midwifery; Member of the Medical Societies of Philadelphia, of the City and County of New-York, of Massachusetts, of Maryland, of Lexington, (Ky.) of New-Orleans, of Pittsburgh, (Pa.) and of many others of Europe. Author of several Works upon Medical and Literary subjects.

'GOLDEN OPINIONS.'

The Art of Medicine is founded on experience.—*Edinburgh Medical and Surgical Journal.*

How egregiously do the greatest men err whenever they lose sight of facts, or substitute sallies of wit or specious arguments in physic, for observation and experience.—*Buchan.*

If an opinion be *erroneous* it requires discussion, that its errors may be exposed. If it be *true*, it will gain adherents, in proportion as it is examined.—*Dr. Cooper.*

Let truth and falsehood grapple. Whoever knew truth put to the worse in a free and open encounter.—*Milton.*

If employment of the lancet were abolished altogether, it would perhaps save annually a greater number of lives than in any one year the sword has ever destroyed.—*Dr. Ring.*

The man who wantonly wields the bloody knife, for the sake of experience, or a vain display of his adroitness, is a human savage, in whose breast soft pity never dwelt.—*Dr. Cumming.*

Abominable is the murdering quack, who, forever impatient to unsheath his blood-thirsty lancet, draws from a fever patient the irreparable balsam of life.—*Dr. Hann.*

I am neither for the ancients, nor for the moderns, but shall be of every age and nation.—*Baglivi.*

Let us study the character of diseases, and let us study the effects of the loss of blood.—*Hall.*

It sometimes requires no little boldness to abstain from the loss of blood.—*Ibid.*

We have not in any instance yielded our assent to authority, however high, when it has been contradicted by our own experience.—*Dewees.*

It is owing to our ignorance that there is any necessity for instruments to cure disease.—*Abernethy.*

If the Reformed System be a good one, let it flourish and progress. If it be a bad one, let it be frowned down by the just censure of an enlightened community.—*Banner.*

Both Surgery and Medicine can and will, in the present astonishing strides of human intellect, be forced to pass a rigid scrutiny, and undergo a radical improvement.—*Smead.*

"Minerals exert a pernicious and baleful influence on the system; they seldom or never cure, but often destroy the patient. Their operation is altogether uncertain, depending entirely on the state of the stomach, whether they act at all or prove injurious."

Among the numerous poisons which have been used for the cure or alleviation of diseases, there are few which possess more active and of course more dangerous powers, than Mercury.—*Hamilton.*

"Mercury, the Lancet, and the Knife, are now almost the only means made use of to cure disease, notwithstanding their deleterious effects are evidently fatal to multitudes."

The popular belief that every country produces simples suitable to cure all the prevailing local diseases, is not void of truth; vegetable substances afford the mildest, most efficient, and most congenial remedies to the human frame. The numerous cures that are daily performed by the use of vegetable medicines, are sufficient evidence of their super-excellent virtues.—*Prof. Rafinesque.*

The Flora of North America is astonishingly rich in remedies. There is no doubt in my mind, that in more diseases than is generally acknowledged, vegetable simples are the preferable remedies. Who knows but in time, these native productions of the field and forest, will so enlarge and confirm their dominion, as to supercede the employment of other medicines.—*Prof. Waterhouse.*

To yield to any authority would here be criminal. Facts must and will stand.—*Dr. Underwood.*

It would be highly advantageous to the public, and likewise to the best part of the Medical Profession, if the predispositions and occasions of disease were made a portion of the education of every gentleman.—*Dr. Armstrong.*

Every physician must rest on his own judgment, which appeals for its rectitude to nature and experience alone.—*Gregory.*

An obstinate adherence to an unsuccessful method of treating a disease, is self-conceit—it generally proceeds from ignorance—it is a species of pride to which the lives of thousands have been sacrificed.—*Ibid.*

I am here insensibly led to make an apology, for the instability of the theories and practice of physic: And those physicians generally become the most eminent, who have the soonest emancipated themselves from the tyranny of the schools of physic.—*Late Author.*

Our want of success is occasioned by the following causes; 1st, our ignorance of the disease; 2d, our ignorance of a suitable remedy; 3d, want of efficacy in the remedy.—*Ibid.*

If truth doth any where manifest itself, seek not to smother it with glossing delusion; acknowledge the greatness thereof, and esteem it thy best victory when the same doth prevail over thee.—*Hooker.*

The whole nation is groaning under the present practice of the Medical Profession, which fosters disease more than cures it, and debases or ruins our constitutions.—*Morison.*

Physicians have been tinkering the constitution for about two thousand years, to cure diseases, and the result of all their discovery is that Brimstone and Mercury are the only two specifics. Diseases remain what they ever were.—*Lacen.*

All men ought to be acquainted with the medical art. I believe that knowledge of medicine is the sister and companion of wisdom.—*Hippocrates.*

In early times skill in healing was esteemed a part of wisdom. I believe the practice of medicine should be agreeable to reason.—*Celsus.*

As health is the most precious of all things, and is the foundation of all happiness, the science of protecting life and health is the noblest of all, and most worthy the attention of all mankind.

Hoffman.

"Not only a reformation in medicine is necessary, but a revolution."

INTRODUCTION.

WHEN we take into consideration the infinite number of medical books already before the public, and the vast number which are daily teeming from the press, it might seem to some almost superfluous to add any more to the long catalogue. I certainly should not intrude myself, or this production, upon the public, was it not imperiously called for. The world groans under the weight of medical publications, and is literally surfeited with them. But what are they? Are they such treatises, or such productions, as are calculated to cure diseases or ameliorate the sufferings of mankind. They certainly are not, as we have fully demonstrated in the following pages. We have shown that the present practice of medicine, instead of exerting a salutary influence, is pernicious and dangerous in the extreme. A few poisonous minerals constitute almost the whole of the *Materia Medica*. In a word, the human family daily fall victims to the present mode of treating the various diseases incident to the human body. Instead of resorting to nature's garden for remedies, the chemical laboratory, or the bowels of the earth, are explored, for articles which are unfriendly and poisonous to the system. This is the case while medical agents, which the Author of Nature has bountifully scattered around us, are neglected or despised. Minerals are adhered to and prescribed; the same as have been handed down to us by European authors, without reference to the indigenous productions of our country, which experience has found to remove disease without entailing any serious consequences.

It is true there are some works which have been written to substitute an improved system of practice; but we know of none which will enable the practitioner to prescribe with success, in diseases generally, in any of the various branches of medicine. Several authors speak of the virtues of different plants and vegetable agents, but none are sufficiently explicit or systematised to enable a person to practice judiciously, without recourse to some of the deleterious medicines made use of by common physicians; neither have they a correct knowledge of medical botany, or the articles they treat of, and recommend. Besides, they appear to be governed by no principles in the treatment of diseases; or, if they have principles, they are at variance with the correct pathology of disease, which renders their treatment very defective, superficial, and often injurious, even more so than that pursued by common physicians. Some have receipts, but no principles; others again have theories, but no remedies. Thus we perceive the labyrinthian difficulties in which the medical world are involved. One system succeeds another so quick, that a writer has been constrained to say there is "no uniformity in medical practice." This year a medicine is extolled as a specific; the next it sinks into oblivion. This year one view is entertained of disease, perhaps the next, one entirely opposite.

Dr. Samuel Jackson, a very respectable physician of Philadelphia, of the old school, thus remarks: "It is a subject of well founded complaint, that it has been a prevailing vice with medical writers, to indulge in partial, encomiastic, and it is to be feared, sometimes fanciful representations of the powers and efficacy of some favorite remedy or mode of practice, to the introduction of which into medicine, they have been instrumental, but have not been justified by subsequent experience. Sanguine expectations have been, in this manner, too often injudiciously excited, that have terminated in disappointment dark and bitter; as the hopes they had nurtured were bright and pleasing. How many of the articles of the former materia medica; celebrated for their virtues; are now known to be *inert* and *useless*! How many of our present medicines have been invested with curative energies for formidable diseases, in which a sober and matured experience has proved them to be of none or of little avail! What different systems and modes of treatment, founded on *baseless* theories, partial views, and limited observation, have enjoyed their short-lived reigns, extolled and defended by misjudging partizans, but which now lie entombed in dusty and undisturbed tomes, and are brought into recollection only to display the *errors* they embraced; and the *follies* of their pretensions!"

For these reasons, many judicious spectators of the medical world, have considered the science of medicine as resting upon no sure basis, but chaos and uncertainty. But whatever discrepancy or difference of opinion there may have been; or still is, among common physicians, they all agree in rejecting the use of medical botany or vegetable agents, and substituting for the cure of disease, *mercury*, the *lancet*, and the *knife*.

This being the state of medicine in the present day, the reader will at once perceive the propriety and necessity of a work calculated to effect a change, or introduce a reformation in the noble science of medicine. To lay before the public, or the world; a system of practice that is both negatively and positively better than that now pursued. First, negatively, that shall abolish the present pernicious treatment. Second, to introduce a system that is infinitely superior—and the Author professes to have accomplished these objects in the following pages. It is no vain experiment, hypothesis, theory, or conjecture, but founded upon the immutable and eternal principles of truth, proved to be so, by a series of experiments; illustrations, and facts, deduced from extensive practice, which challenge the severest scrutiny, and court the minutest investigation from friends or enemies. We only ask a fair trial of the treatment recommended, and this every honest man will acknowledge we are entitled to, before they decide upon the merits or demerits of the work.

This work is the result of long experience and great research, and the materials have been collected from a great variety of sources. Ancient and modern authors have been referred to and analyzed, and every thing valuable has been retained. I have availed myself of all the information worth preserving, contained in every botanical publication which has issued from the press of this country or Europe; but I must confess that I have derived very little practical information from any of them.

I have spared neither pains nor expense to acquire a knowledge of the practice of the most noted botanical physicians, retaining from each every thing which I have proved by experience to be useful. I have not thought it beneath me to converse with *Root* and *Indian Doctors*, and every one who has professed to possess any valuable remedy, or any improved method of treating any disease. The hints and suggestions of experienced nurses and female practitioners have not escaped my notice. For, says a former President of the New-York College of Physicians and Surgeons, "there is not a maxim or remark of any experienced female or nurse, which is not based upon sound pathological principles." They are generally diligent observers of nature, and often point out her indications in a correct and masterly manner, which often disappoints the physician and the friends of the patient. I have also availed myself of every advantage arising from a regular course of study in the University of the State of New-York. Besides, an extensive practice for many years in the most populous city in the United States, (New-York) with repeated consultations with the most distinguished surgeons and physicians, has afforded me opportunities of witnessing and treating every variety of disease, and trying every variety of practice. I have also attended many thousand cases at the *United States Infirmary*, where constant application is made for medical aid, in physic, surgery, and midwifery. During the last season, (a period of three months) under the appointment of the New-York Board of Health, we prescribed for about one thousand cases of Cholera, either in the premonitory or confirmed stages.*

The information which I have received from others, the opportunities of clinical practice, the improvements I have myself made, have brought me into the possession of a system of practice which I have found invaluable, and altogether superior to that pursued by physicians of the old school. Schools have been founded to disseminate this practice, and are now in successful operation, the graduates of which are giving us daily evidences of the unprecedented success of the practice. One of our graduates writes as follows: "I have one objection to your practice—it destroys disease too soon. It gives me no opportunity to

* By virtue of the power and authority in me vested, as Alderman and Warden of Health of the Tenth Ward, I do hereby nominate, constitute, and appoint, WOOSTER BEACH, M. D. to visit and take charge of, and to give such medical advice and assistance, as may be required, to all poor persons, inhabitants of the ward, who may be affected with the prevailing epidemic; and also to call to his aid such assistance from the medical faculty, as he may require and deem necessary and expedient.

JOHN PALMER, *Alderman Tenth Ward.*

July 17th, 1832,

After receiving the above appointment, the Corporation immediately issued and posted up in every part of the Ward the following Bill:

Tenth Ward Medical Station.—All persons affected with Looseness, Pain in the Bowels, or Cramp, are requested to apply immediately to Dr. W. BEACH, No. 95 Eldridge-street, where they will receive ADVICE and MEDICINE, free of charge.

By order of the Board of Health.

THOMAS T. WOODRUFF, }
HENRY P. ROBERTSON, } *Executive Committee.*
WILLIAM MANDEVILLE. }

New-York, July 18, 1832.

make out a bill, I cannot keep my patients down for a long period, like other physicians."

In prosecuting these inquiries and discoveries, our treatment has been so much at variance with that of other physicians, that their opposition has been very considerable. The illiberal and selfish portion of them have incessantly calumniated and persecuted me. I have borne all, however, with fortitude, from a conviction that I was engaged in a righteous cause, the cause of truth and humanity. Their ignorance of our practice and motives, offer some excuse or apology for this treatment. Had they known us and our principles, we might have received, at least, some countenance and courtesy, if not some commendation. But I am pleased to say that more recently their hostility has ceased, and they have manifested more respect.

In consequence of the opposition I have met from the faculty, I am at a loss to know to whom I shall dedicate this work. If I prepare it for the medical profession alone, however meritorious it may prove, I might not receive their patronage. If I dedicate it to botanical physicians, I may not receive sufficient encouragement from them to warrant the circulation of it. If I address it exclusively to the people at large, they may not take sufficient interest in it. Therefore, upon mature consideration, I have concluded—

First, To adapt it to our *Reformed Medical Colleges*, as a text book; also to the *Members of our Reformed Medical Society*. This work is particularly necessary and required for these institutions.

Second, *To Physicians of the Old School*.—Professor Rafinesque, in his introduction to his Medical Flora, or Medical Botany of the United States, thus observes; "Much has been done to teach and spread correct medical knowledge. The establishment of medical schools, chairs of materia medica, of medical and systematical botany, medical and botanic gardens, infirmaries, hospitals, have largely contributed to impart medical and botanical knowledge through the professional class.

This purpose has been aided by numerous publications of learned physicians and botanists, medical works, pamphlets and journals, pharmacopeias, dispensaries, inaugural theses, &c.

Notwithstanding all these means, it is a *positive* and *deplorable* fact, that but *few medical practitioners apply themselves to the study of botany*, and therefore are deprived of the aid of comparative medical botany.

"We have, however," says the author of the Manual of the Materia Medica, "collected in this manual, all the knowledge the profession could furnish us on that very interesting, and indeed too much neglected subject, the properties and the medicinal application of our indigenous productions. Although we possess many very valuable plants, still comparatively few have as yet been introduced into regular practice, and the reason may be, that they have not been made the subject of extensive public experiments, and that those which have been made in private practice, and an account of which has been published in periodical journals, have produced little impression on the minds of physicians, and have already fallen into oblivion. Why this general indifference for our native productions? Why not give them a fair trial? and

if they prove valuable substitutes, why should we send to every quarter of the globe for our remedies, while we are so well provided for at home? Are we not rich in the vegetable kingdom? Our supposed poverty proceeds, we fear, more from our want of industry than from the real scarcity of natural productions, possessing properties which entitle them to our attention."

Third, *Botanical Physicians*.—By this class, we understand those practitioners who prescribe vegetable medicines exclusively. These physicians are very numerous, and receive very considerable patronage from the public. There are several grades, or classes of them, such as are vulgarly called "root or Indian doctors, patent and steam doctors, herbalists, empiricks," &c. Some of these have considerable information, and are very judicious and successful in the treatment of many diseases. "Even in large cities, and in the centre of medical light," says Rafinesque, "they are thriving, because they avail themselves of the resources afforded by active plants, often neglected or unknown to the regular practitioners."

Others again of the above class, are "illiterate, ignorant, deceitful, reserved, and very conceited: they follow a secret or absurd mode of practice, or deal in nostrums or patent remedies. All these classes need instruction, and it ought to be afforded to them, that they may become properly acquainted with those which they employ or may avail themselves of."

In relation to botanic physicians in general, the following remarks of an author are very applicable:

"The author has long seen, and with regret, the want of something like a general, systematic treatise upon the different branches appertaining to medicine, on a plan adapted to the peculiar profession of botanic physicians; and he has looked anxiously for some one, more competent to the task, to undertake it. But as yet, no work of the nature of the one proposed, even professedly, has appeared, that I am aware of. Many books, indeed, have been written upon botany; but they have chiefly been either a scientific classification of plants, unconnected with their medicinal properties; or, mere fugitive treatises upon the medical qualities and uses of particular plants, which, though very useful as far as they go, were not intended by their authors as a general guide for the practice of physic. Impelled, then, by the necessity of a work, such as is proposed above, the author has attempted in the following pages, to supply it: how far he has succeeded, others will determine. This, however, he can confidently assure the members of the botanic profession, that in his hands the treatment of diseases recommended has proved eminently successful; and it would be but a poor compliment to his Botanic Brethren to suppose that in their hands it would not be equally efficacious.

"It will not be denied, that the depressed and almost outlawed condition under which Botanic Practitioners have laboured in modern times, is in a great measure owing to the deficiency of a substantial, comprehensive and regular system of practice which should render them *Independent* of any other sect, elevate them to a standard of respectability, and remove all grounds for the imputations of ignorance and incompe-

tency, which are now so lavishly heaped upon them by interested persons. Until such a standard is established, societies formed, and the Botanic Profession *brought up to that standard*, public confidence in them, as a body, cannot be expected.

“And I would ask, what should hinder the accomplishment of so desirable an object? Are botanic medicines so intrinsically inefficient, or so deservedly so unpopular, that they should forever be condemned to insignificance? None dare say it. Who has not, in the course of his life, seen astonishing cures performed by the simple virtues of vegetables—even when administered by the humble man of “roots and herbs,” when the whole force of minerals has failed? Does any one say that vegetable medicines are less safe than minerals?—Alas! the miserable martyrs to the latter who daily meet our eyes, forbid it. Why then do we grovel in the dust, when the Almighty has put in our possession such ample materials for relieving the sufferings of our fellow beings?—And why are we permitted to render this service only with halters about our necks? Why is it that the Botanic Profession is proscribed in most of the States by legislative restrictions, which, in many of them, amount to absolute tyranny, as unconstitutional, as unjust? If there is a shadow of a cause for such oppression, aside from the insidious misrepresentations of interested persons, it is because Botanic Physicians are not just to themselves. Let them unite—form societies—establish a respectable and intelligent standard of admission, and the favour of the public will soon break their fetters.”

Fourth, *The People generally*.—“It is not less certain,” says Professor Rafinesque, “but still more deplorable, that beyond the immediate sphere of medical knowledge, the majority of the people are yet in prey to medical credulity, superstition, and delusion, in which they are confirmed by the repeated failures of theorists, and the occasional success of empirical rivals.”

The improvements in medicine, since the revival of learning, (says Buchan,) have by no means kept pace with those of the other arts. The reason is obvious. Medicine has been studied by few, except those who intended to live by it as a business. Such, either from a mistaken zeal for the honour of medicine, or to raise their own importance, have endeavoured to disguise and conceal the art. Medical authors have generally written in a foreign language; and those who are unequal to this task, have even valued themselves upon couching, at least, their prescriptions, in terms and characters unintelligible to the rest of mankind.

The study of law has likewise, in most civilized nations, been justly deemed a necessary part of the education of a gentleman. Every gentleman ought certainly to know at least the laws of his own country: and, if he were also acquainted with those of others, it might be more than barely an ornament to him.

The different branches of philosophy have also of late been very universally studied by all who pretended to a liberal education. The advantages of this are manifest. It frees the mind from prejudice and superstition; fits it for the investigation of truth; induces habits of reasoning and judging properly; opens an inexhaustible source of entertainment; paves the way to the improvement of arts and agriculture;

and qualifies men for acting with propriety in the most important stations of life.

Natural History has likewise become an object of general attention; and it well deserves to be so. It leads to discoveries of the greatest importance. Indeed agriculture, the most useful of all arts, is only a branch of Natural History, and can never arrive at a high degree of improvement where the study of that science is neglected.

Medicine, however, has not, as far as I know, in any country, been reckoned a necessary part of the education of a gentleman. But surely no sufficient reason can be assigned for this omission. No science lays open a more extensive field of useful knowledge, or affords more ample entertainment to an inquisitive mind. Anatomy, Botany, Chemistry, and the *Materia Medica*, are all branches of Natural History, and are fraught with such amusement and utility, that the man who entirely neglects them has but a sorry claim either to taste or learning. If a gentleman has a turn for observation, says an excellent and sensible writer, surely the natural history of his own species is a more interesting subject, and presents a more ample field for the exertion of genius, than the natural history of spiders and cockle-shells.

We do not mean that every man should become a physician. This would be an attempt as ridiculous as it is impossible. All we plead for is, that men of sense and learning should be so far acquainted with the general principles of medicine as to be in a condition to derive from it some of those advantages with which it is fraught; and at the same time to guard themselves against the destructive influence of Ignorance, Superstition, and Quackery.

As matters stand at present, it is easier to cheat a man out of his life than of a shilling, and almost impossible to detect or punish the offender. Notwithstanding this, people still shut their eyes, and take every thing upon trust that is administered by any pretender to medicine, without daring to ask him a reason for any part of his conduct. Implicit faith, everywhere else the object of ridicule, is still sacred here. Many of the Faculty are no doubt worthy of all the confidence that can be reposed in them; but as this can never be the character of every individual in any profession, it would certainly be for the safety, as well as the honour of mankind, to have some check upon the conduct of those to whom they entrust so valuable a treasure as health.

The veil of mystery, which still hangs over Medicine, renders it not only a conjectural, but even a suspicious art. This has been long ago removed from the other sciences, which induces many to believe that Medicine is a mere trick, and that it will not bear a fair and candid examination. Medicine, however, needs only to be better known, in order to secure the general esteem of mankind. Its precepts are such as every wise man would choose to observe, and it forbids nothing but what is compatible with true happiness.

Disguising Medicine not only retards its improvement as a science, but exposes the profession to ridicule, and is injurious to the true interests of society. An art, founded on observation, can never arrive at any high degree of improvement, while it is confined to a few who make a trade of it. The united observations of all the ingenious and sensible

part of mankind, would do more in a few years towards the improvement of Medicine, than those of the Faculty alone in a great many. Any man can tell when a medicine gives him ease as well as a physician; and if he only knows the name and dose of the medicine, and the name of the disease, it is sufficient to perpetuate the fact. Yet the man who adds one single fact to the stock of Medical observation, does more real service to the art than he who writes a volume in support of some favourite hypothesis.

Very few of the valuable discoveries in Medicine have been made by physicians. They have in general either been the effect of chance or of necessity, *and have been usually opposed by the Faculty, till every one else was convinced of their importance. An implicit faith in the opinion of teachers, and attachment to systems and established forms, and the dread of reflections, will always operate upon those who follow Medicine as a trade. Few improvements are to be expected from a man who might ruin his character and family by even the smallest deviation from an established rule.*

If men of letters, says the author of the performance quoted above, were to claim their right of inquiry into a matter that so nearly concerns them, the good effects in medicine would soon appear. Such men would have no separate interest from that of the art. They would detect and expose assuming Ignorance under the mask of Gravity and Importance, and would be the judges and patrons of modest merit. Not having their understandings perverted in their youth by false theories, unawed by authority, and unbiassed by interest, they would canvass with freedom the most universally received principles in Medicine, and expose the uncertainty of many of those doctrines, of which a physician dares not so much as seem to doubt.

No argument, continues he, can be brought against laying open Medicine, which does not apply with equal, if not greater force, to religion; yet experience has shown, that since the laity have asserted their right of inquiry into these subjects, Theology, considered as a science, has been improved, and the interests of real religion have been promoted.

Had other medical writers been as honest as this gentleman, the art had been upon a very different footing this day. Most of them extol the merit of those men who brought Philosophy out of the schools, and subjected it to the rules of common sense. But they never consider that Medicine, at present, is in nearly the same situation that Philosophy was at that time, and that it might be as much improved by being treated in the same manner. Indeed, no science can either be rendered rational or useful, without being submitted to the common sense and reason of mankind. These alone stamp a value upon science; and what will not bear the test of these ought to be rejected.

I know it will be said, that diffusing medical knowledge among the people might induce them to tamper with Medicine, and to trust to their own skill, instead of calling a physician. The reverse of this, however, is true. Persons who have most knowledge in these matters, are commonly most ready both to ask and follow advice, when it is necessary. The ignorant are always most apt to tamper with Medicine, and have the least confidence in physicians. Instances of this are daily to be met with among the ignorant, who, while they absolutely refuse to take a

medicine which has been prescribed by a physician, will swallow with greediness any thing that is recommended to them by their credulous neighbours. Where men will act even without knowledge, it is certainly more rational to afford them all the light we can, than to leave them entirely in the dark.

It may also be alleged, that laying Medicine more open to mankind, would lessen their faith in it. This indeed would be the case with regard to some; but it would have a quite contrary effect upon others. I know many people who have the utmost dread and horror of every thing prescribed by a physician, but who will nevertheless readily take medicine which they know, and whose qualities they are in some measure acquainted with. Hence it is evident, that the dread arises from the Doctor not from the drug. Nothing ever can or will inspire mankind with an absolute confidence in physicians, but an open, frank and undisguised behaviour. Whilst the least shaddow of mystery remains in the conduct of the Faculty, doubts, jealousies, and suspicions, will arise in the minds of men.

No doubt cases will sometimes occur, where a prudent physician may find it expedient to disguise a medicine. The whims and humours of men must be regarded by those who mean to do them service; but this can never affect the general argument in favour of candour and openness. A man might as well allege, because there are knaves and fools in the world, that he ought to take every one he meets for such, and to treat him accordingly. A sensible physician will always know where disguise is necessary; but it ought never to appear on the face of his general conduct.

The appearance of mystery in the conduct of physicians not only renders their art suspicious, but lays the foundations of Quackery, which is the disgrace of Medicine. No two characters can be more different than that of the honest physician and the quack; yet they have generally been very much confounded. The line between them is not sufficiently apparent; at least it is too fine for the general eye. Few persons are able to distinguish sufficiently between the conduct of that man who administers a secret medicine, and him who writes a prescription in mystical characters and an unknown tongue. Thus the conduct of the honest physician, which needs no disguise, gives a sanction to that of the villian, whose sole consequence depends upon secrecy.

No laws will ever be able to prevent quackery, while people believe that the quack is as honest a man, and as well qualified as the physician. A very small degree of medical knowledge, however, will be sufficient to break this spell; and nothing else can effectually undeceive them. It is the ignorance and credulity of the multitude, with regard to Medicine, which renders them such an easy prey to every one who has the hardiness to attack them on this quarter. Nor can the evil be remedied by any other means but by making them wiser.

The most effectual way to destroy quackery in any art or science, is to diffuse the knowledge of it among mankind. Did physicians write their prescriptions in the common language of the country, and explain their intentions to the patient, as far as he could understand them, it would enable him to know when the medicine had the desired effect; would inspire him with absolute confidence in the physician; and

would make him dread and detest every man who pretended to cram a secret medicine down his throat.

Men in the different states of society, have very different views of the same object. Some time ago it was the practice in some parts, for every person to say his prayers in Latin, whether he knew any thing of that language or not. This conduct, though sacred in the eyes of our ancestors, appears ridiculous enough to us; and doubtless some parts of ours will seem as strange to posterity. Among these we may reckon the present mode of medical prescription, which, we venture to affirm, will some time hence appear to have been completely ridiculous, and a very high burlesque upon the common sense of mankind.

But this practice is not only ridiculous, it is likewise dangerous. However capable physicians may be of writing Latin, I am certain apothecaries are not always in a condition to read it, and that dangerous mistakes, in consequence of this, often happen. But suppose the apothecary ever so able to read the physician's prescription, he is generally otherwise employed, and the business of making up prescriptions is left entirely to the apprentice. By this means the greatest man, even when he employs a first-rate physician, in reality trusts his life in the hands of an idle boy or girl, who has not only the chance of being very ignorant, but likewise giddy and careless. Mistakes will sometimes happen in spite of the greatest care; but where human lives are concerned, all possible methods ought certainly to be taken to prevent them. For this reason, the prescriptions of physicians, instead of being couched in mystical characters and a dead language, ought, in my humble opinion, to be conceived in the most plain and obvious terms imaginable, and, indeed, every physician should be his own apothecary.

Diffusing medical knowledge among the people would not only tend to improve the art, and to banish quakery, but likewise to render medicine more universally useful, by extending its benefits to society. However long Medicine may have been known as a science, we will venture to say, that many of its most important purposes to society have either been overlooked, or very little attended to. The cure of diseases is doubtless a matter of great importance; but the preservation of health is of still greater. This is the concern of every man, and surely what relates to it ought to be rendered as plain and obvious to all as possible. It is not to be supposed that men can be sufficiently upon their guard against diseases, who are totally ignorant of their causes. Neither can the Legislature, in whose power it is to do much more for preserving the public health than can ever be done by the Faculty, exert that power with propriety, and to the greatest advantage, without some degree of medical knowledge.

Men of every occupation and condition in life might avail themselves of a degree of medical knowledge; as it would teach them to avoid the dangers peculiar to their respective stations; which is always easier than to remove their effects. Medical knowledge, instead of being a check upon the enjoyments of life, only teaches men how to make the most of them. It has indeed been said, *that to live medically is to live miserably*: but it might with equal propriety be said, *that to live rationally is to live miserably*. If physicians obtrude their own ridicu-

lous whims upon mankind, or lay down rules inconsistent with reason or common sense, no doubt they will be despised. But this is not the fault of Medicine. It proposes no rules that I know, but such as are perfectly consistent with the true enjoyment of life, and every way conducive to the real happiness of mankind.

We are sorry indeed to observe, that Medicine has hitherto hardly been considered as a popular science, but as a branch of knowledge solely confined to a particular set of men, while all the rest have been taught not only to neglect, but even to dread and despise it. It will however appear, upon a more strict examination, that no science better deserves their attention, or is more capable of being rendered generally useful.

People are told, that if they dip the least in medical knowledge, it will render them fanciful, and make them believe they have every disease of which they read. This I am satisfied will seldom be the case with sensible people; and suppose it were, they must soon be undeceived. A short time will show them their error, and a little more reading will infallibly correct it. A single instance will show the absurdity of this notion. A sensible lady, rather than read a medical performance, which would instruct her in the management of her children, generally leaves them entirely to the care and conduct of the most ignorant, credulous, and superstitious part of the human species.

The benefits of Medicine, as trade, will ever be confined to those who are able to pay for them; and of course, the far greater part of mankind will be every where deprived of them. Physicians, like other people, must live by their employment, and the poor must either want advice altogether, or take up with that which is worse than none. There are not, however anywhere wanting well-disposed people, of better sense, who are willing to supply the defect of medical advice to the poor, did not their fear of doing ill often suppress their inclination to do good. Such people are often deterred from the most noble and praise-worthy actions, by the foolish alarms sounded in their ears by a set of men, who, to raise their own importance, magnify the difficulties of doing good, find fault with what is truly commendable, and flee at every attempt to relieve the sick which is not conducted by the precise rules of Medicine. These gentlemen must, however, excuse me for saying, that I have often known such well-disposed persons do much good; and that their practice, which is generally the result of good sense and observation, assisted by a little medical reading, is frequently more rational than that of the ignorant retainer to physic, who despises both reason and observation, *that he may go wrong by rule*; and who, while he is dosing his patient with Medicines, often neglects other things of far greater importance.

Many things are necessary for the sick besides Medicine. Nor is the person who takes care to procure these for them, of less importance than a physician. The poor oftener perish in diseases for want of proper nursing than of Medicine. They are frequently in want of even the necessaries of life, and still more so of what is proper for a sick-bed. No one can imagine, who has not been a witness of these situations, how much good a well-disposed person may do, by only taking care to

have such wants supplied. There certainly cannot be a more necessary, a more noble, or a more godlike action, than to administer to the wants of our fellow-creatures in distress. While virtue or religion are known among mankind, this conduct will be approved ; and while heaven is just, it must be rewarded !

Persons who do not choose to administer Medicine to the sick, may nevertheless direct their regimen. An eminent medical author has said, "That by diet alone all the intentions of Medicine may be answered." No doubt a great many of them may ; but there are other things besides diet, which ought by no means to be neglected. Many injurious and destructive prejudices, with regard to the treatment of the sick, still prevail among the people, which persons of better sense and learning alone can eradicate. To guard the poor against the influence of these prejudices, and to instil into their minds some just ideas of the importance of proper food, fresh air, cleanliness, and other pieces of regimen necessary in diseases, would be a work of great merit, and productive of many happy consequences. A proper regimen, in most diseases, is at least equal to Medicine, and in many of them it is greatly superior. [*Buchan.*]

The following observations by Dr. N. R. Smith, are applicable :

"It neither comports with the *honour* nor the *interest* of a liberal and philosophic profession, to withhold from those of other avocations a certain amount of correct information, relative to its principles and precepts. Medicine is now so capable of asserting its dignity as a science, that it is no longer necessary to shroud it in a veil of mystery, and thus to win for it a superstitious faith, in place of rational confidence. Mysticism can be employed as well by the ignorant as by the scientific—indeed with more zeal and effect, for the former are often the dupes of their own jugglery, or at least are not restrained by conscience. When, therefore, he who relies upon science for his means of success, disingenuously mystifies the business of his art to gain the confidence of the credulous, he is preparing the public mind to become the dupe of empiricism. Men of science often complain that they are ill requited for their intellectual toil, when empiricism is seen to win from them the public confidence. They do not reflect, however, that this is chiefly because medical men have first obscured their art, and deluded the community into the belief that in it there is "some *charm*, some conjuration, or some mighty magic." They are disappointed, therefore, when they learn somewhat of the limited resources of our art, and readily transfer their faith to those who are ignorant, or dishonest enough to keep up the delusion. Men are indignant when we prescribe means as simple as the waters of Jordan, instead of smiting upon the part and uttering some technical incantation.

"To disenthral the public mind, medical men must cast off the whole garb of the charlatan, nor suffer any thing to remain which shall confound medical philosophy with empiricism. The profession must seize every opportunity to educate the community in the first principles of medicine, and when this is accomplished, the medical scholar may, in public opinion, safely rest his ripened claims to reputation, which now is often wrested from him, when he will not resort to the degrading tricks of the charlatan to maintain it.

Undoubtedly the ingenuous part of our profession suffer most severely, not from the itinerant nostrum-monger, but from the scientific empiric—that member of the profession who avails himself of that which science reveals, but, in practice, associates it with the artifice of the charlatan. Splendid instances of success achieved by such, can always be pointed out, and against them the honest part of the profession can vindicate itself only by educating the community in the true character of the science of medicine.

In addressing, therefore, the educated public, I conceive that I am indirectly subserving the true interests of my profession, while my direct object is the instruction of others. I consider, also, that it is an urgent dictate of humanity to furnish the community with a certain amount of knowledge, particularly in surgery, because at this time they are singularly ignorant of its simplest principles—because infinite mischief and suffering is created by its abuses—and because the maladies which demand the surgeon, are such as brook not a moment's delay. Accidents often occur which prove immediately fatal, when the knowledge of a single fact would enable any individual at least to arrest the hand of death till more efficient aid could be procured."

ORDER AND ARRANGEMENT OF THE WORK.

In the arrangement of this work, I have divided it into parts, as follows:

Part First—Contains the means of preventing disease and promoting health and longevity.

Part Second—Contains the principles or theory of the American Practice of Medicine.

Part Third—Contains an original or new system of Nosology, which will be found very simple and concise; also, the description, causes, symptoms, and morbid appearances of diseases, with the Old and Reformed Practice; and occasionally cases, illustrating the efficacy of the same.

Part Fourth—Contains our Reformed System of Surgery, with the same arrangement as the above.

Part Fifth—Contains Operative Surgery.

Part Sixth—Contains Illustrations of our Practice.

Part Seventh—Contains Materia Medica, giving a description, history, and general properties of the articles used in our system of practice, with engravings or figures representing the various medicinal plants, &c.

Part Eighth—Contains Pharmacy, or the compositions and use of the various articles of the Materia Medica.

In the treatment of diseases, we are not so tenacious about the particular agents used, (minerals excepted) as we are for an adherence to the theory or principles laid down; although much depends upon the peculiar *formula* or *medicines* employed.

In concluding this preface, I will quote a few remarks from a late production, entitled "Manual of the Materia Medica." The editors observe:

"We like and admire the ingenuous maxim promulgated by the cele
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brated Baglivi. 'I am,' said he, 'neither for the ancients, nor for the moderns, but shall be of every age and nation.' This candid and philosophical declaration shall also be our motto. We have observed in our addition to this work, as much as it laid in our power, the golden rule of Locke—'*Try all things, hold fast that which is good.*' For, as the same author remarks, 'to prejudice other men's notions before we have looked into them, is not to show their darkness, but to put out our own eyes.' We cannot see without regret, therefore, the constant opposition which every thing *new* encounters from some individuals who can read the past only, but will not admit, or cannot understand the improvements of the present. The history of medicine offers us but too many examples of this system of opposition to every thing that is not *antique*; and the difficulties which the justly celebrated Harvey, Jenner, Bichat, Gall, and Broussais, experienced in promulgating their useful discoveries and doctrines, are remarkable instances of this spirit so hostile to every suggestion of improvement or innovation.

"Locke, that great master of *matter, mind, and human passions*, has faithfully, although quaintly recorded this feature of the character of man, too much to the purpose not to be cited in this place.

"'Truth,' says he, 'scarce ever yet carried it by vote any where at its first appearance. New opinions are always suspected, and usually opposed without any other reason, than because they are not common. But *truth*, like gold, is not the less so for being newly brought out of the mine. 'Tis trial and examination must give it price, and *not any antique* fashion; and though it be not current by public stamp, yet it may, for all that, be as old as nature, and certainly not less genuine.

"At the present epoch, when the collision of opposite and conflicting opinions is so great, it is very needful to refer from individual practice and experience to nature, unbiassed observation, general principles, and sound philosophical induction."

"Although there has been no lack of endeavour to render the work as accurate, useful and satisfactory as possible, yet still it may be found deficient in one or all of these particulars: errors no doubt there are, sufficiently numerous to require the exercise of much charity, and an equal share of candour to excuse; neither of which, however, is solicited; for they are only desirable or estimable, so far as they are the *spontaneous* effusion of generous and enlightened minds."

"We expect that indulgence, which the zeal for doing well, and the desire of aiding the advancement of medical science, even when not attained, always deserves. In conclusion, we shall say of our labour, (if small things may be compared to great,) what the celebrated Johnson said of his Dictionary:—'In this work, when it shall be found that much is omitted, let it not be forgotten that much likewise is performed; and though no book was ever spared out of tenderness to the author, and the world is little solicitous to know whence proceeded the faults of that which it condemns; yet it may gratify curiosity to inform it, that this work was written with little assistance of the learned, and without any patronage of the great; not in the soft obscurities of retirement, or under the shelter of academic bowers, but amid inconvenience and distraction.' "

Friends may flatter, and enemies may defame, but the public at large will do justice, because they are far removed from the sphere of personal feeling. It is to this tribunal I appeal for a decision of the *merits* or *demerits* of this work.

It was announced in the Prospectus that an abridgment of this work would be issued, but we have considered it best to issue but one edition at present, and defer the other for a short time; as soon as it is called for, it will be issued.

Some have intimated that they intend to infringe upon the copy-right of this work, by publishing it in some form. None we presume will hazard this undertaking, who will take the trouble to refer to the United States law on this subject.

Many of the *Plants* have been drawn from nature, and a number from the excellent work of Professor Rafinesque, called the *Medical Flora*. Others have been reduced from Barton, Bigelow, &c. The foreign ones have been principally taken from the *British Flora*, and *Thornton's Family Herbal*, which were originally drawn from nature by a celebrated artist.



PART FIRST.

MEANS OF PREVENTING DISEASE, AND PROMOTING HEALTH AND LONGEVITY.

"It is better to prevent than to cure."

CHAPTER I.

TEMPERANCE, ABSTINENCE, DIET, &c.

As perfect health is the greatest earthly blessing we can enjoy, without which all other blessings are of little consequence, I deem it of the first importance to point out the means of promoting it; by paying proper attention to which, persons who are born with, and enjoy a good constitution, will attain a healthful and long life, and even those who are delicate and tender, will arrive at an advanced age. These means hold forth the doctrine that regularity and temperance in all things, are highly conducive to health and happiness; and on the contrary, that irregularity and intemperance bring their votaries to an untimely grave.

When the various functions of the body, voluntary and involuntary motions, are performed with ease, and suffer no interruption, the body is said to be in health; in a contrary case it is diseased. Considering the many dangers to which man is exposed, it is surprising that he should remain in health so long; and our astonishment increases when we reflect how often he escapes the dangers prepared by his own hand. But parental nature frequently repairs the injury in a manner unknown to us. To set down supinely with a notion, that if the Majesty of Heaven wills us to die, we certainly shall, in the use of means to prolong life; and if He wills the contrary, we shall live, in the neglect of those means, is a conduct unscriptural and absurd. Disease may be considered the consequence of the moral or rather immoral conduct of man, in deviating from a line prescribed by his Maker.

The powers of life may be compared to the oil in a lamp: in time they will be exhausted; they may be supported or diminished; when exhausted death invariably closes the drama. Death from mere old age may be compared to the extinction of the light when the oil is all consumed; and death from disease, to the blowing out of the light.

when the oil is not all consumed, and might have burned longer. There are laws in nature, by which man may arrive to maturity, to the summit of health and vigour; and there are laws, by which his powers of life are lessened and finally exhausted. These are the "bounds which he cannot pass.

In order to extend the common term of life, mankind must be persuaded to return to that primeval state of nature, from which, history furnishes us almost incredible instances of longevity. The antideluvians enjoyed an uninterrupted state of health; their manner of living and vegetable diet was simple and not injurious. They had little need to attend to their health, as the seeds of disease were little scattered in such a state. We have deserted from the simple mode of life, which prevailed in the primitive ages. We have acquired our improved state of mental culture, by sacrificing to it much of our bodily welfare. We are less accustomed to consult what nature requires, with respect to diet, mode of life, clothing, &c. than to follow fashions, customs, and our own disordered inclinations.

The desire of long life is inherent in all human nature: and the possibility of prolonging it was never doubted by the orientals. The most important circumstances which favour the attainment of long life, are

Temperance, Abstinence, and Diet.

"Temperance is a kind of regimen," says Dr. Thomas, "under which every man may put himself without interruption to business, expense of money, or loss of time; and may be practised by all ranks and conditions, at any season, or in any place. If exercise assists in throwing off superfluities from the body, temperance prevents them; if exercise clears the vessels, temperance neither satiates nor overstrains them; if exercise promotes a free circulation of the blood, temperance gives nature full play, and enables her to exert herself in all her force. Cheerfulness of temper and vigour of body, are the usual results of temperance; on the contrary, depression of spirits, a shattered constitution, disease, and often poverty, are the consequences of a continued course of intemperance.

It is much easier to preserve health than to recover it when impaired, and to prevent diseases than to cure them. Towards the first, the means are generally in our own power, little else being required than strict temperance in all things; but towards the latter, the means are uncertain and perplexed, and for the knowledge of them, the greatest portion of mankind must apply to others, of whose skill and judgment they are in a great measure ignorant.

The man who wishes to live long, be healthy, and die without sickness either of body or mind, but by mere dissolution, or a long course of years, must submit to live regularly, and be temperate in his habits; since he cannot otherwise expect to enjoy the fruits of such a life, nor be agreeable to himself or useful, in all probability, to his friends; neither can he relish the bounties of Divine Providence, nor acquit himself of his duties to God.

Some inconsiderate and sensual persons affirm, indeed, that a long

life is no blessing, and that the state of a man who has passed his seventy-fifth year, cannot really be called life, but death; but we daily see, in our public papers, instances recorded of persons having attained the age of ninety or an hundred, enjoying most of their faculties; and whoever will read the tract of Sir Thomas Barnard on the comforts of old age, as also the life of Lewis Cornaro, the Venetian, will perceive that this is a mistaken notion. At the age of one hundred years, he was, by temperance in all his pursuits and indulgences, and particularly in his diet, capable of mounting his horse without any assistance, or advantage of situation, and could not only ascend a flight of stairs with ease, but climb up a hill on foot, from bottom to top, with the greatest ease; moreover, he was gay, pleasant, and good humoured; free from perturbation of mind, and every disagreeable thought. He did not find life burthensome, but, on the contrary, spent every hour, we are informed by him, with the greatest delight and pleasure; sometimes in conversing with men of his acquaintance, valuable for their good sense, manners, and letters; sometimes in reading the works of favourite authors, and occasionally in writing.

He was extraordinary sober, and dieted himself with so much wisdom and precaution, that finding his natural heat decaying by degrees in his old age, he also diminished his diet by degrees, so far as to stint himself to a very trifling meal indeed. By this means he preserved his health, and was also vigorous to the age of an hundred years; his mind did not decay; he never required the assistance of spectacles; neither did he lose his hearing; and that which is no less true than difficult to believe is, that he preserved his voice so clear and harmonious, that at the end of his life he sung with as much strength and delight as he did at the age of twenty-five years.

“O, Temperance,” says Sir William Temple, “thou physician of the soul as well as the body, the best guardian of youth and support of old age, the tutelar goddess of health, and universal medicine of life, that clears the head and cleanses the blood, that eases the stomach and purges the bowels, that strengthens the nerves, enlightens the eyes, and comforts the heart; in a word, that secures and perfects digestion, and thereby avoids the fumes and winds to which we owe the colic and spleen, those crudities and sharp humours that feed the scurvy and gout, and those slimy dregs and humours of which the gravel and stone are formed within us; diseases to which mankind are exposed rather by the viciousness than frailty of our nature, and by which we often condemn ourselves to greater torments and miseries of life, than perhaps have yet been invented by anger and revenge, or afflicted by the greatest tyrants upon the worst of men. And yet so little notion have the generality of mankind of the virtue of temperance, that life with them is nearly one continued scene of intemperance.

To what cause, so much as to intemperance, are owing faded youth and premature old age, an enervated body, and an enfeebled mind, together with all that long train of diseases which the indulgence of appetite and sense have introduced into the world. Health, cheerfulness, and vigour, are well known to be the offspring of temperance. The man of moderation culls the flowers of every allowable gratification

without dwelling upon it until the flavour be lost: he tastes the sweets of every pleasure without pursuing it till the bitter dregs rise; whereas the man of the opposite character dips so deep as to stir up an impure and noxious sediment, which lies at the bottom of the cup.

How quickly does the immoderate pursuit of carnal pleasures, or the abuse of intoxicating liquors, ruin the best constitutions! Indeed these vices generally go hand in hand. Hence it is that we so often behold the votaries of Bacchus and Venus, even before they have arrived at the prime of life, worn out with diseases, and hastening with swift pace to an untimely grave. Did men reflect on the painful diseases and premature deaths which are daily occasioned by intemperance, it would be sufficient to make them shrink back with horror from the indulgence even of their darling pleasures.

The innocent too often feel the direful effects of it. How many wretched orphans are to be seen embracing dung-hills, whose parents, regardless of the future, spent in riot and debauch what might have served to bring up their offspring in a decent manner! How often do we behold the miserable mother, with her helpless infants, pining in want, while the cruel father is indulging his insatiate appetites!

It is too true, that the major part of mankind are intemperate and sensual, and they love to gratify their appetites and commit excess; and seeing that they cannot avoid being greatly injured by their excesses, they, by way of apologizing for their conduct, say that it is better to live ten years less, and enjoy themselves, not properly considering of what importance are ten years more of life, especially a healthy life, and at a maturer age, when men become sensible of their progress in knowledge and virtue, which they cannot obtain to any degree of perfection before this period.

A life of irregularity and intemperance has the certain effect to destroy persons of the best constitution even in the prime of life; while, on the other hand, one of regularity and temperance will frequently preserve men for a length of time, who are of a very delicate or bad constitution, and far gone in years. Whoever will read the life of Lewis Cornaro must be convinced of this. This Venetian had been addicted to a life of intemperance up to his fortieth year, the consequence of which was, that a heavy train of infirmities had invaded him, and made great inroads on his constitution; and after having to no purpose tried every means of relief that art and medicine admitted of, he at last, by the advice of his physicians, entered on a life of the strictest temperance, by which he regained his health, and lived to a very advanced age. Daily observation has, indeed, fully convinced me that an elderly man, even of a delicate constitution, who leads a regular and sober life, has a better chance of a long one, than a young man of the best constitution, who invariably leads a disorderly one.

That irregularities of diet, repletion, and unwholesome food, are the origin of many diseases, cannot admit of a doubt; and that the preservation of health much depends on a proper regimen, is equally obvious.

When it is considered that many serious disorders are entirely occasioned by an improper diet, and that in almost every complaint the due direction of diet is perhaps of equal importance with the prescription of

medicines, it is highly blameable to neglect this powerful resource. To delicate women and sickly persons, to pregnant women and those who are nurses, and to young children, restrictions on diet are indispensably necessary.

In every stage of human existence the functions of the stomach are of high importance, and the same rules of diet which prove beneficial to the invalid or weakly, will generally apply to the aged. The substances selected for the diet of old persons should be adapted to the state of their teeth; and solid viands, and those which are difficult of solution, ought to be minced, or otherwise prepared to meet the defects of the chewing instruments. In addition to the gradual failure of the teeth, the stomach itself suffers a diminution of its powers to convert food into chyle and bodily refreshments; and hence it becomes needful to be more particular about the diet in advanced life.

It has wisely been observed by Hippocrates (who has been called the father of medicine), that if a man eats sparingly, and drinks little, he is nearly certain of bringing no disease upon himself, and that a moderate supply of food nourishes the body best. The quantity of food which nature really requires for her support, is small, and he that lives temperately, and eats and drinks moderately at each meal, stands fair to enjoy sprightliness, vivacity, and freedom of spirits. Bodies that are governed by temperance and regularity, are rarely hurt by melancholy, or any other affection of the mind. To have a clear head, we must have a clean stomach, for this is the grand reservoir in which the food is first deposited, and from thence its nutritive power is distributed throughout all parts of the body.

An error into which many people fall is that of eating too much at once. If the stomach be filled with a greater quantity of food than it can easily bear, or what is proper, its coats are stretched beyond their natural tone, and rendered incapable of performing its digestive powers; the food being longer retained than by the laws of the circulation it ought to be, and undergoing a disorderly fermentation, gives rise to crudities, sour eructations, flatulence, listlessness, headach, and stupor; for the stomach having an intimate connection with the brain and nervous system by sympathy, whenever one of them is disordered, the other seldom fails of partaking in the calamity.

Who never fasts, no banquet e'er enjoys;
Who never toils or watches, never sleeps.

He that consults his health must check his appetite, and invariably rise from table with the ability and disposition to eat and drink still more than he has done. He should also diligently apply himself to discover what kinds of food are best suited to him; for the proverb that whatever pleases the palate must agree with the stomach and nourish the body, or that which is palatable must be wholesome and nourishing, is founded in error. The best rule will be not to take any thing, but in such quantity as the stomach can easily digest, and to make use of only those things which from observation and experience the person has found to agree with him. The quality, as well as quantity is, therefore, to be

taken into consideration. By repeated trials and experience any man may acquire a perfect knowledge of his constitution, and ascertain not only what food, but likewise the liquor, that agrees best with his stomach; and in regulating his diet, he may place a safer reliance on his own judgment than he can on the opinion of his medical attendant, be he ever so skilful.

An attention to diet and temperance in all other respects is not only necessary for the preservation of health, but is likewise of great importance in the cure of diseases, and many of them indeed may be cured by a suitable diet alone. Avoid, therefore, any excess at table, or the partaking of a great variety of dishes; for intemperance not only renders the understanding cloudy and injures the constitution, but likewise degrades the soul. Do not confine temperance, however, to merely eating and drinking, but let it be extended to the moderating every other appetite, inclination, or passion.

Abstinence is the best cure for any excess which has been committed in eating or drinking. In paying a strict attention to temperance, we are to take care at the same time not to carry it so far as to border on abstinence of an excessive nature; for this is by no means conducive to health, but the direct contrary, because a copious supply of fresh and wholesome food is requisite for the support of the body, and is peculiarly necessary for those who labour hard."

Dr. Cheyne imputes most of the chronical diseases, the infirmities of old age and short lives, to repletion, or intemperance; and that they may be either prevented or cured by abstinence.

But if abstinence is not sufficient for the cure of diseases, yet it greatly assists the operation of medicines, and is a preventive against a multitude of dangerous disorders. Several writers relate extraordinary cures performed by it, and many instances of its extending the term of human life. It is, indeed, surprising to what a degree of age the primitive Christians of the East, who retired from persecution into the deserts of Arabia and Egypt, lived healthful, and cheerful, on a very little food. Cassian assures us, that the common allowance for twenty-four hours, was only twelve ounces of bread and mere water; and adds, that on this spare diet, Arsenius, tutor to the emperor Arcadius, lived an hundred and twenty years, and many others to nearly the same age. A man of the name of Laurence preserved his life to an hundred and forty years, by temperance and labour. And Spotswood mentions one man who attained the age of one hundred and seventy-five years, by means of abstinence.

It appears from the registers of the society of Friends, that one half of those born among them, live to the age of forty-seven years; whereas, says Dr. Price, that of the general population of London, one half live only 23-4 years. The number of Friends who live to the age of seventy, compared with the general population of London, is as four to one. This superior longevity is properly attributable to the temperate habits of the society generally; and it may be added, that from the same cause they enjoy a greater portion of health, and exemption from the commonly allotted ills of life. A still greater benefit flowing from the habitual temperance of this society, is, the almost total absence

PART FIRST.

MEANS OF PREVENTING DISEASE, AND PROMOTING
HEALTH AND LONGEVITY.

of pauperism among them. Although they relieve the public from all charge on account of their poor, it is believed that they are not subjected to any heavy burden thereby—their habits of temperance and economy operating to keep nearly all above want.

Food which is simple, provided it be easy of digestion, and affords a due quantity of nourishment, is far preferable to that which is compounded by the rules of art and cookery, and rendered more savoury by an addition of aromatic spices. Eating a variety of high-seasoned viands, and partaking of many dishes, is very unwholesome; for the stomach thereby becomes overloaded with an heterogeneous mass, exceedingly pernicious in its effects. Moreover we are induced to exceed the bounds which nature has prescribed for us, and by such means, the stomach labours under all the direful effects of repletion. Food, plainly roasted, broiled, or boiled, is all that is really necessary for people in health; and to eat moderately of one dish, is certainly most wholesome. Simplicity of food requires no physical alteratives, and due exercise with temperance, prove the best cathartics.

The new school of France seems to be well aware of this truth, and have retired back to the simplicity of nature, to those days of primitive manners, when the dietetic school spread its doctrines abroad for the relief of man. If you ask the French professors what is the best mode of curing disease? they will answer you, like the Greek orator, when it was inquired what was the first essential in eloquence? he answered *action*; and what the second? *action*; and what the third? *action*: So would the physicians of Paris, if it were inquired what was the first requisite in curing disease, they would answer *diet*; and the second? *diet*; and the third? *diet*!

Wonderful cures, says Dr. Mease, have been effected by simplicity of diet. The father of professor Cooper of South Carolina, was cured, in London, of an asthina, to which he had been long subject, by an exclusive diet of boiled carrots for two weeks, as recommended by John Wesley, in his “Primitive Physic.” During this time he drank little water. He remained well for twelve years; but having returned to his former generous living he was again attacked.—I have heard of another cure by the same diet.

The disease called “broken wind,” in horses, which is no more than the asthma in the human species, is cured in England by an exclusive diet of the same vegetable.

A lady in Philadelphia was cured of a most severe rheumatism by a diet of milk solely; and Dr. Cheyne records, that Dr. Taylor, a contemporary with himself, was cured of epilepsy by the same diet. English Malady, p. 255. Our books of medicine record many other cures effected by rigorous simplicity of diet.

In eating our food, due care should be taken to chew, or masticate it sufficiently, previous to its being swallowed: this is a point deserving of a very strict attention, and may be deemed the first process of digestion; for without the solid parts of our food being well triturated in the mouth, and at the same time incorporated with a due proportion of the salivary secretion, it cannot be converted into good chyle, or healthy nutriment.

CHAPTER II.

FOOD AND DRINK.

“Man should content himself with the produce of the fields, gardens, and dairy.”

Animal Food.

It appears very evident that man in his primeval state of simplicity, never ate any *animal food* whatever. Previous to his transgression, he was not permitted to kill any animals, or partake of any meat, as appears by the command of his Maker, recorded in Genesis. Vegetables alone seems to have been his only food. From this fact we may infer, that vegetable, is more congenial to the system, than animal food. We may infer this also from the effects which follow the long continued use of meat. Sailors who use it on long voyages are subject to the scurvy, which often proves fatal, when a recurrence to vegetables immediately removes the disease. A vast number of other complaints are unquestionably produced by animal food. The evil consequences arising from it are in part owing to the quantities of oil or grease it contains; by reason of which, the digestion is disordered, the bile vitiated, the blood corrupted, and cutaneous and other diseases induced.

Injurious effects are very frequently immediately felt after eating a meal of high seasoned meats; such as oppression at the stomach, lethargy, and subsequently, if persisted in, dyspepsia, and other complaints. Animal food then may in general be considered hurtful, and requires a very strong and healthy stomach to digest it; and it ought, therefore, to be taken very sparingly, and not more than once a day. Besides it is better taken cold than warm. When animal food and wine have been received into the stomach, no sooner is the digestive process begun, even before any portion is introduced into the circulating fluid, than the action of the heart is increased, and the pulse is quickened; but the same effect is not observed from vegetables.

Vegetable Food.

Vegetable food is much lighter, more easily digested, and much less inclined to putrefy than animal food. Besides, from the natural stimulus which it possesses, the bile is rendered more healthy, by which the regular peristaltic motion of the bowels is kept up, and costiveness, the source of so many evils, obviated. This is easily proved, for every one knows that the use of certain fruits, such as tamarinds, peaches, prunes, pears, plumbs, whortleberries, &c. besides other articles which will be hereafter mentioned, keep the bowels in a constant soluble state.

To show still further the influence of vegetable food, in promoting a healthy state of the system, we need only advert to the inhabitants of

those countries who use it exclusively. For health and vigour of constitution, they are noted. Observe, for instance, the Irish, who live upon potatoes and buttermilk, how muscular and athletic they are, and how their countenances glow with genuine health. They can endure more hardships and more privations than other people, and yet subsist upon this vegetable from infancy to old age. Our forefathers, the hardy sons of New-England, enjoyed uninterrupted health, and lived to a good old age by adhering to a simple diet, such as bean porridge, and hasty (Indian meal) puddings. But how have their descendants degenerated in point of health, by a departure from these simple and wholesome rules. It must be acknowledged, that by their habits of luxury, they do not live half as long as their ancestors. We shall not be very particular as regards certain kinds of food, being well persuaded that whatever agrees with a person or is easily digested, may be taken as a general rule, due caution being observed with regard to the quantity; in other words taking good care not to overload the stomach with any kind of food whatever.

I shall make a few remarks upon the articles of diet most in use.

1st, Bread. Bread is said to be the staff of life, being used more than any other kind of diet. The articles then, of which it is composed, are of the greatest consequence. I am satisfied that bread as now made, and used, is one great cause of disease. The flour from which it is made, is separated from the bran, the coarser part, designed by nature to keep up a continued action, and stimulus to the bowels, for the purpose of preventing costiveness, and a deranged state of the stomach and intestines.

Another objection to bread made in our large cities, is the quantity of yeast added to the flour, which ferments it so much as to destroy the sweetness, and often forms acidity.

Some, it is said, add alum, vitriol, and other deleterious substances, which render it very unwholesome. This is another source of indigestion and complaints of the liver. In grinding wheat, the coarser parts should never be separated from the fine; but both should be ground coarse and mixed together, then made into bread in the ordinary manner. A small quantity of indian may be added, and yeast to ferment it sufficiently. This kind of bread, although it is not so white as that made of superfine flour, is more palatable, much lighter, more easily digested, regulates the bowels, and I know not but I may with propriety add, that with other precautions, it is a cure for the dyspepsia.

2d, Tea and Coffee. Tea and Coffee, drank too strong, are injurious, especially to invalids, dyspeptic and nervous people; they produce debility, hysterics, and other evil consequences. In general, however, the ill effects of these liquids proceed rather from the imprudent use than from any bad qualities which they possess. Tea or Coffee when green or new, is not so good as old. The black teas are preferable to the green. Taken in moderate quantities neither too strong, nor too weak, or hot, it will seldom do harm; moreover, it should not be drank upon an empty stomach; but if it be bad, which is often the case, and too strong, or substituted in the room of solid food, it must have many ill effects, by impairing the powers of the stomach, produ-

cing various nervous symptoms, palpitations of the heart, restlessness, headache, a pale and sallow hue of the skin, and all the usual train of morbid feelings which accompany dyspepsia.

3d, Cookery. The arts of cookery render many things unwholesome, which are not so in their own nature. By jumbling together a number of different ingredients, in order to make a poignant sauce, or rich soup, the composition proves almost a poison. All high seasoning, pickles, &c. are only incentives to luxury, and never fail to injure the stomach, they disorder it and impair the health of the system generally, by rendering the food too heating, and difficult of digestion, and by inducing us to partake of too much food, or to eat in the absence of the natural appetite. "It were well for mankind, if cookery, as an art, were entirely prohibited. Plain roasting or boiling is all that the stomach requires. These alone are sufficient for people in health, and the sick have still less need of a cook."

4th, Pastry. Pastry is generally unwholesome, and whatever is hard of digestion. In a word, plain and wholesome food, simply cooked, ought to be used. Ripe fruits of all kinds may be taken with safety; but crude and unripe fruits are very dangerous. They bring on acidity and bowel complaints.

5th, Milk. Milk is the food destined by nature for the infant period, and seems admirably adapted for the use of young children, as well as adults, whose powers of digestion are enfeebled either by dissipation or disease. In its pure state, however, it is apt to disagree with some persons; in which case it will be advisable to dilute it with gruel or water. Those who labour under pulmonary consumption and hectic fever, are frequently confined to a milk diet, and in such cases, the milk of the goat has been much employed in preference to that of the cow, being of a lighter nature. When that of the former is not to be obtained, that of the latter may be rendered more easily digested, by allowing it to stand for some time, and then skimming off the cream from it.

Simplicity in Diet.

Nature delights in the most plain and simple food, and every animal, except man, follows her dictates. Man alone riots at large, and ransacks the whole creation in quest of luxuries, to his own destruction. An elegant writer of the last age speaks thus of intemperance in diet: "For my part, when I behold a fashionable table set out in all its magnificence, I fancy that I see gouts and dropsies, fevers and lethargies, with other innumerable distempers, lying in ambuscade among the dishes."

Water.

Good water is of the greatest importance to the animal economy. It is the most simple of all liquids.

"Nothing like simple element dilutes
The food, and gives the chyle so soon to flow"

Water should be free from any mineral or vegetable ingredient. It may be considered pure when it is perfectly clear without any disagree-

able smell or taste, soft, and easily unites with soap. The more pure the water, the more healthy. When it is impregnated with foreign substances, ill effects follow the use of it. The water of marshes and stagnant ponds are not fit to drink, and the waters of many cities, particularly the city of New-York, is very injurious. It is highly impregnated with the carbonate of lime, as may be seen by the decomposition of calcareous matter which is copiously deposited on the bottom and sides of those vessels in which it has been boiled. By using such impure water constantly for drink, and cooking, large quantities of earthy and deleterious substances are taken into the system, and occasion dyspepsia, gravel, and other complaints. Rain and snow water, and that running over gravel beds, is considered purest; but good spring water is better than either. The noted "rain-water doctor" cured his patients by prescribing the free use of this "universal menstruum." It should never be drank too cold, especially when the body is heated, or in a profuse perspiration. The most dreadful consequences follow drinking cold water in hot weather, while the pores are open or when in a copious perspiration. Spasms, convulsions, and death, often follow quickly. If this should happen, perspiration should be restored as soon as possible. Bleeding should not be resorted to as is now the custom, but give a large tea spoonful or two of camphorated spirit in a little gin or brandy, every fifteen minutes until relief is afforded. The hands and face should be washed or bathed before any cold water is drank, and then a small quantity only taken at a time. Let it also be held in the mouth a few minutes before it is drank. It is as equally dangerous to drink fresh buttermilk when a person is overheated. A relation of the gentleman who prints this work, died in a few minutes after drinking it freely. Many have lost their lives for want of these precautions. Another caution is necessary for farmers and other persons residing in the country. When stooping down to drink from brooks on woody mountains in this country, they will sometimes meet with small lizards and insects concealed among the leaves in the water, which are sometimes inadvertently swallowed, and prove dangerous.

Simple water in general is sufficient for those who are in health, but it may be rendered more palatable by the addition of molasses. The addition of a table spoonful of good lemon syrup to half a pint of fresh water, makes a very pleasant and wholesome drink. Good syrup should be procured, as it is often adulterated by the juice of lemons that are decayed. Common lemonade made by the fresh juice of lemons or limes, and sweetened with loaf sugar, makes a cooling and agreeable drink in hot weather.

CHAPTER III.

FERMENTED LIQUORS.

Ardent Spirits.

WATER, says Dr. Cheyne, is the only simple fluid fitted for diluting, moistening, and cooling; the only ends of drink, appointed by nature; and happy had it been for mankind if other mixed and artificial liquors had never been invented. Water alone is sufficient, and effectual for all the purposes of human wants in drink. Strong liquors were never designed for common use: they were formerly kept as other medicines are, in Apothecaries' shops, and prescribed by Physicians, to refresh the weary, strengthen the weak, and raise the low-spirited: As natural causes will always produce their effects, the effects of the common use of wine and spirituous liquors, is to inflame the blood into gout, stone, rheumatism, fevers, pleurisies, &c. and to dry up the juices, and scorch and shrivel the solids. Those whose appetite and digestion are good and entire, never want strong liquors to supply them with spirits; such spirits are too volatile and fugitive for any solid or useful purposes of life.

Spirituous liquors, inflame the blood, corrode the coats of the stomach, impair digestion, destroy the appetite, and induce many diseases of the most dreadful kind, such as gout, scirrhus of the liver or spleen, dropsy, apoplexy, palsy, madness, and fevers of different kinds: they also impair the judgment, destroy the memory, and produce intoxication.

Of all the ways in which spirituous liquors are used, that of drinking them in the form of drams is the most injurious; and although, perhaps, it may be a slower way of destroying life than by taking a dose of any active poison, still in the end it will be attended with that direful effect. The habit steals on imperceptibly with many, and under any depression of spirits, they have recourse to it; but one dram begets a necessity for another, and at length the indulgence becomes unlimited, and the vice uncontrolable. The constitution soon shews its effects; the appetite is destroyed, digestion impaired, lowness and dejection of the mind with tremors of the nerves ensue, the face is blotched, and the nose red and beset with bumps, nausea, vomitings, frequent eructations, flatulency, and great disorder in the biliary organs take place; the liver becomes enlarged, indurated, and tubercular, and at last dropsy manifests itself, if the patient is not previously cut off by apoplexy or palsy.

It does not seem easy to determine which of the two, viz. opium or spirituous liquors, by being improperly used, proves most detrimental to the human constitution: unluckily, the victims who addict themselves to either, are ensnared by a habit which they find it impossible to relinquish; because the constitution, when habituated to a strong stimulus,

becomes incapable of carrying on the functions of life without continual excitement, which of itself brings on debility and premature decay.

The speedy effects which opium, or indeed any of its preparations, is observed to have on those persons who take it habitually, are an exhilaration of animal spirits; and from a dosing and depressed state into which they sink after passing the usual time of taking the dose, they become alert and cheerful; but those who accustom themselves to this drug are of a yellow complexion, look much older than they really are, lose their appetite, and their bowels are invariably constipated. Those who indulge in a free use of strong and spirituous liquors have but little desire for food after a time, the liver becomes diseased (being either beset with tubercles, or indurated, scirrhus, or enlarged), the countenance is tinged of a yellow hue, general debility ensues, and dropsy at last destroys life. Palsy is often also the consequence of a continued course of such intemperance.

Habits of drunkenness often take their rise from a connection with some company or companion already addicted to the practice; which affords an almost irresistible invitation to take a share in the indulgences which those about us are enjoying with so much apparent relish and delight; or from want of regular employment, which is sure to occasion many superfluous and pernicious cravings, and frequently this among the rest; or it may have originated from grief, or fatigue, either of which strongly solicit that relief which inebriating liquors administer for the present, and furnish a specious excuse for complying with the inclination. But the habit, when once adopted, is continued by different motives from those to which it owes its origin. Persons addicted to excessive drinking suffer, in the intervals of sobriety, and near the return of their accustomed indulgence, a faintness and oppression which it exceeds the common patience of human nature to endure. This is usually relieved for a short time by a repetition of the same excess: and to this relief, as to the removal of every long-continued pain, those who have once experienced it are urged almost beyond the power of resistance.

Wine.

Wine, unmixed with Alcohol, used in moderation, may be considered a wholesome drink. In those countries where it is produced in abundance, the people drink freely of it without injury, and are proverbially temperate. In France, where there are such immense quantities of wine, a drunkard is seldom or never to be found. It seems to destroy that hankering after ardent spirits, which is so peculiar to other countries where wine is not much made. The wine imported into this country contains such a large quantity of alcohol, that it becomes injurious. Hence the necessity and importance for Americans and others to plant vineyards. Some of our most sensible men give it as their opinion, that if wine was as freely used as in France, it would eradicate the universal vice of intemperance.

Says a noted writer upon this subject: "Wine, when used in moderation, proves generally grateful to the stomach; it warms and stimulates it to greater exertion; promotes, probably, a more speedy discharge of its contents, and from its immediate action, imparts a transient sensa-

tion of warmth and comfort; but when taken in an immoderate quantity, it produces intoxication for the time, and its exhilarating effects having subsided, it leaves the frame disordered, relaxed, and weak. Wine may be considered as the best of cordials, where its good qualities are not destroyed by too free and frequent a use. Most of the great drinkers of vinous and spirituous liquors, die of relaxation, debility, loss of appetite, tubercles and scirrhus of the liver, or dropsy. Good wine taken in moderation, cannot be injurious."

"The usages of wine are great, both as a beverage and a medicine. Several physicians recommend it as an excellent cordial, and particularly serviceable in fevers. The moderate use of wine is of service to the aged, the weak, and the relaxed, and to those who are exposed to a warm and moist, or a corrupted air: Wine deserves to be ranked first in the list of Antiscorbutic liquors. Considered as a medicine, it is a valuable cordial in languors and debilities; grateful and reviving; particularly useful in the low stage of malignant or other fevers for raising the pulse, and resisting putrefaction."

Beer.

Malt liquors waste the powers of life, keep up a constant fever, exhaust the spirits, inflame the blood, cause headache and premature old age, and drank frequently and to excess, expose the body to numberless diseases. They particularly disagree with persons of a bilious temperament, and those subject to flatulency, coughs, and inflammatory affections. In cases, however, of great debility, where a stimulus is required, they may be given with success, particularly in the form of *Porter*. This article is very strengthening to females, debilitated in nursing.

Spruce Beer.

This is a very cooling and pleasant beverage, which may be freely drank. It must be made, not of the syrup of spruce which is now customary, but with a decoction of the leaves, by which the flavour and qualities are rendered altogether different, and much improved.

Medical or Root Beer.

The following Beer will not only be found a substitute for many common drinks, but a very pleasant and wholesome beverage. Besides, it possesses alterative properties, attenuates viscid humours, and purifies the blood.

Take Sassafras root, (Rad. Sassafras) q. s.

" Burdock root, (Arctium Lappa) q. s.

" Wild Cherry tree bark, of the root, (Prinos Virginiana) q. s.

" Root of Black Alder, (Prinos Verticillatus) q. s.

Make a strong decoction by boiling several hours, strain, sweeten well with molasses or honey, then add when it is blood warm, sufficient yeast to ferment it. In a short time, or as soon as it commences fermentation, it is fit for use. This may be freely taken as a diet drink. It is very pleasant and excellent to prevent disease and keep the system in a healthy state, and it is grateful and cooling in all kinds of fevers.

Cider.

Cider made from ripe apples, properly fermented, and racked or purified, is, of all fermented liquors, the most innocent and the best. But too little pains is taken with cider. It may be made by care and proper management as fine flavored and as clear as wine.

Mead.

Mead made by adding honey to water and fermenting it, is very pleasant and wholesome.

CHAPTER IV.

AIR.

FEW are aware of the effect of air in producing disease, or the promotion of health. It is the principal medium by which animal life is supported, and so necessary is it for this purpose, that life cannot exist a moment without it, as will appear by placing an animal in the exhausted receiver of an air pump.

Impure Air.

Impure air is a very common cause of diseases. Where it is very impure it proves fatal suddenly; and where it is mixed with that which is pure, the effect of it on the system soon becomes perceptible. Indeed it would appear that most disorders proceed from unwholesome air, or an atmosphere highly charged with deleterious gases. The influenza, which often occurs as an epidemic, is caused by it, seizing thousands of persons and spreading over extensive districts. The *Indian Cholera*, so highly pestilential, is communicated by an impure atmosphere. Also, the intermittent, remittent, and yellow fevers. Cities, towns, and villages, have been almost depopulated, by reason of unwholesome air received into the circulation, through the medium of the lungs.

The deleterious nature of impure air is still more strikingly exemplified, where carbonic acid gas, called "choke damp," or fixed air, has accumulated in large quantities, as in wells, mines, beer vats, and in such places as the Grotto Del Cani in Italy, where animal life becomes immediately extinct. Dogs are thrown into the latter place, and are immediately killed by inhaling the gas with which it abounds; and the great number of lives that are annually lost in wells and mines, is familiar to all; from which we learn the great influence which impure air has upon our health. Persons should never descend any of these places, until they have previously let down a light to ascertain if combustion can be supported. If the light is extinguished, I scarcely need add that no one can subsist in them a moment. By thus letting down a lighted candle into any place that has been long closed, many valuable lives might annually be saved. I may here also observe, that in case a per-

son has been thus suffocated, another person may be let down with a rope fastened to a tub; or a noose may be made of the rope, by which he may be enabled to take hold of and rescue the patient, provided he holds his breath during the time he is in the lower part of the well, that he may not inhale the gas; or a number of ordinary bags, or those made of muslin, may, in a few minutes, be made, and placed over the head and tied to the neck of the person; these (bags) may be kept open by attendants above, a sufficient time to admit the common atmospheric air, which will enable him to respire and continue any length of time where this gas exists.

Mr. Schröder, member of the New-York Literary and Philosophical Society, has communicated an account of an ingenious contrivance, called a "safety pump," which extricates this kind of air from wells, vats, &c. in a very few minutes. It has been successfully tried several times in this city. A pump made of tin, in the ordinary manner, would no doubt answer the same purpose.

When it has been discovered that this kind of air exists in any place, in order to remove it, slacked line must be plentifully introduced. The carbonic acid gas unites with the lime, for which it has a great affinity, and a carbonate is formed which renders the air pure.

Air of Crowded Assemblies.

When we reflect upon the quantity of atmospheric air which a single person renders impure or unfit for inhalation, we shall readily see the danger arising from the air of crowded assemblies. It is computed that a man destroys the vital portion of a gallon of air per minute. To test this, let an animal be confined in a jar of common air, perfectly closed; in a short time the inhalation of it absorbs the oxygen, and leaves only the nitrogen and a small proportion of carbonic acid gas, which, being incapable of supporting combustion, soon takes the life of the animal. In the same manner the health of people is impaired by being confined in jails, prisons, or being in crowded assemblies, or sleeping in close rooms, and where there are a number of others. Many have been suffocated in this manner. A most melancholy circumstance occurred in the "black hole" of Calcutta. A vast number of prisoners were crowded so closely together, where there was little or no circulation of air, that most of them died in a short time. It is owing to this, that close stoves prove so injurious. They destroy the vital portion of the air, so indispensable to health and life, while the remaining impure air is inhaled, and the consequence is head-ache, languor, and other ill effects. Those who are obliged to use small stoves, should place a vessel of water upon them, which, in a great measure, affords a preventive.

Persons should be careful also to promote a free circulation of air in their houses, by frequently opening their windows. I have been in the habit of doing it at night, without receiving the least injury; but on the contrary, I think, with much benefit. A noted physician was so impressed with the importance of this subject, that he slept with his windows open, during the whole year. In the winter, snow was often found upon his bed. He considered pure air of vital importance to health.

“I would propose,” says a writer, “that the casements of all public rooms, and indeed of private houses, shall be so constructed, as that the upper division shall slide down, and that a certain portion of them, according as the room is more or less crowded, be always kept open. By thus promoting a free and constant circulation of air in every apartment, whether occupied or not, the internal and external air become nearly of an equal temperature; the foul air which is generated in close unoccupied chambers, and which adheres to the walls and furniture, will be carried off before it is accumulated, and the usual practice of airing rooms, by opening the windows, and warming them with fires, will be less, if at all, necessary.

“The most neat and delicate person, after having passed the night in his bed-chamber, does not, when he awakes, discover any offensive smell in his room: but if he quits it for a few minutes, and returns to it, after having been in the open air, and before fresh air has been admitted, he will quickly discover an essential difference.”

In crowded meetings, or assemblies, delicate persons often become sick and faint, and in every place where the air becomes injured by repeated breathing, or by fires, candles, &c.

Air of Cities.

The air in cities is injured by being so often breathed, and stagnated by narrow streets; numerous and compact houses and apartments; a dense population; exhalations arising from putrid substances; filth; smoke of factories; dirty streets; &c. The streets of our cities are altogether too narrow, as well as too filthy. Those who come from the country to the city, often become immediately affected by the polluted and contaminated air.

Our cities should be built as Babylon and other ancient cities were. The streets were wide; houses a distance apart; numerous gardens, trees, plants, &c. It is a disgrace to our municipal authorities, that no more attention is paid to the cleanliness of our streets and yards; the exhalations arising from which is not only unpleasant, but very unwholesome. Yards, privies, and every house, should be often thoroughly cleansed and white-washed.

Burying within Meeting Houses, Cities, &c.

Another detestable practice is to bury within large cities, churches, &c. The air is rendered extremely fetid, and unhealthy, by the decay of animal matter, which often may be experienced on entering such places. This being inhaled by the lungs, must prove injurious, especially to weak and delicate persons. This practice should be strictly forbidden. “In most eastern countries it was customary to bury the dead at some distance from any town. As this practice obtained among the Jews, the Greeks, and also the Romans, it is strange that we should not have followed their example in a custom so truly laudable.

Air confined in Vessels.

It becomes necessary to use great caution in rendering air pure in vessels, otherwise malignant diseases may prevail on board of them.

Lime should be occasionally thrown into different parts of the hold, and the scuttle left open to permit the stagnant air to escape; but what is still better, ventilation should be used in every vessel of any magnitude, which throws the pure air to the bottom and expels the foul.

Change of Air.

The effect of a change of air on the health is almost incredible, especially by removing from the city to the country; and the effect seems still greater on infants and children than adults, thousands of whom annually die from the effects of impure air. Many who have been labouring under the most serious and apparently incurable diseases, by removing from the city to the country, or from an inland residence to the sea shore, have rapidly recovered. I might mention striking instances of this fact. It is often equally as salutary to remove from one climate to another of an opposite temperature. It is often the case that the whole system undergoes a complete change, without the use of medicine. Persons afflicted with pulmonary and nervous diseases, should be careful to avoid the air of great towns or cities. Those who are unable to leave the city for any length of time, should frequently take excursions in the country, or on the water.

Trees and Plants.

Trees and plants are great purifiers of the atmosphere, and are conducive to health. They emit oxygen gas, (the only vital portion of the air) during the day, while at night they imbibe, and decompose it, and retain the carbonic acid gas or fixed air, the deleterious nature of which has been pointed out. By this we see how much they contribute to life and health. Let them therefore be nursed and cultivated, both for health and ornaments.

Burning Charcoal.

The practice of burning charcoal to cook, or to heat rooms, has become very common, and many have lost their lives by the gas produced by it. The newspapers have lately recorded many cases where jars, or vessels of charcoal, have been placed in cabins or rooms, and the persons sleeping in them, have been killed. This is a very dangerous practice and never ought to be repeated.

Pure Air in Disease.

A sensible writer on this subject thus observes: "If fresh air be necessary for those in health, it is still more so for the sick, who often lose their lives for want of it. The notion that sick people must be kept very hot, is so common, that one can hardly enter the chamber where a patient lies, without being ready to faint, by reason of the hot suffocating smell. How this must affect the sick any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not, however, to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and, if possible, by opening the windows of some other apartment.

“The air of a sick person’s chamber may be greatly freshened, and the patient much revived, by sprinkling the floor, bed, &c. frequently with vinegar, juice of lemon, or any other strong vegetable acid.

“In places where numbers of sick are crowded into the same house, or, which is often the case, into the same apartment, the frequent admission of fresh air becomes absolutely necessary. Infirmarys, hospitals, &c. are often rendered so noxious, for want of proper ventilation, that the sick run more hazard from them than from the disease. This is particularly the case when putrid fevers, dysenteries. and other infectious diseases prevail.”

CHAPTER V.

EXERCISE.....BY DR. THOMAS.

THE labourer is apt to murmur that he is necessitated to earn his bread by the sweat of his brow, and, looking round on his superiors, he repines at his condition and station, considering that as hard and afflictive, which infinite wisdom has destined to be absolute, if not the only method by which he can be put in possession of the chief of all earthly blessings,—a sound body and a quiet mind; for those whom poverty obliges to labour for their daily bread, are not only the most healthy, but, all things considered, generally the most happy of mankind.

Toil, and be strong. By toil the flaccid nerves
Grow firm, and gain a more compacted tone;
The greener juices are by toil subdu’d,
Mellow’d, and subtiliz’d; the vapid old
Expell’d, and all the rancour of the blood.—*Armstrong.*

The industrious labourer, who is under the necessity of earning his daily sustenance by personal exertion, commonly enjoys good health; he eats his scanty meal with a good appetite, unassisted by provocatives, which his active and athletic body, by proper exercise, is soon enabled to digest; and at the return of evening he retires to undisturbed repose, where sound and uninterrupted sleep recompenses for his toil. Health makes his bed easy, and his wearied limbs, recruited by sound repose, fit him for the labour of the ensuing day. As his wants are few, he is nearly a stranger to care and solicitude; and his progeny are partakers with him in the same inheritance. On the other hand, the sluggard is exposed to a variety of temptations; and that indolence and inactivity are the source of much immorality, we may soon be convinced of by casting our eyes round the world. They also lay the foundation of many painful diseases, and at length the mind, as well as the body, dwindles into a state of torpor.

Indolence impedes the organic functions, undermines the fountains of health, and gradually but invariably leads to disease. Accordingly

we find that those persons who are obliged to labour for their livelihood are generally strangers to the gout and some other disorders, which may be considered as the offspring of good living and indolence. It is an established law of nature, that moderate labour or due exercise is essential to the preservation of health; and although the energies of life may be impaired by excessive labour, and premature old age, with its many infirmities, be the consequence, yet the decree of the Deity that man should earn his bread by the sweat of his brow, may be considered rather as a blessing than a curse in our present state of existence.

Let us be ever so attentive to our regimen and other circumstances, yet it is impossible to keep ourselves in a healthy state if unaccompanied by due exercise: there is no substitute which we can appropriate for the non-observance of this salutary branch of personal management. Nothing so effectually prevents indigestion, and consequently strengthens the solids, as exercise; but unless it be duly and properly persevered in, and our bodies daily habituated to it, we cannot experience all that benefit which accompanies its use. In the formation of our frames, and from the nature of our constitution, it evidently appears to have been the positive intention of Providence to create in us, for our well being, an absolute necessity for exercise. Our love of motion is surely a strong proof of its utility, and nature implants no disposition in vain. It seems, moreover, to be a law throughout the whole animal creation, that no creature, without exercise, should enjoy health, or be able to find subsistence.

Were men to live in an habitual course of exercise and temperance, there would be but little occasion for using medicines: accordingly we find that those are the most healthy who subsist by the chase; and that men lived longest when their lives were employed in hunting, and had little food besides what they caught. It has been remarked that all those who have attained a very advanced age have undergone great labour and fatigue in their younger years; such was the case with Parr and Jenkins, the two oldest men on record.

By an attention to exercise, the tone and vigor of the body are very much increased; the nervous energy, and also circulation of the blood, are materially accelerated; and this increased impetus of the blood through the whole system produces an effectual determination to the surface of the skin, and a free perspiration is the consequence. By the same means, the body is disposed to sleep, the appetite is increased, the tone of the stomach and other organs concerned in the process of digestion preserved, and the blood is determined from the interior parts; thereby preventing, as well as removing obstructions, and powerfully obviating any tendency to overfulness in the system.

Moreover, by exercise, the spirits are enlivened, as well as the body refreshed; and it is an undeniable truth that where it is neglected, the strength and energy of the whole machine gradually fall to decay, and a morbid irritability is induced, with a long train of those unpleasant symptoms which usually accompany chronic weakness. The natural powers of the stomach and intestines sustain particular injury, the appetite is vitiated, and the bile and other fluids employed by nature in the process of digestion, are very imperfectly secreted, or perhaps con-

siderably obstructed: the muscular fibres of the body become relaxed and debilitated; the whole animal economy is disordered; and a train of nervous and hypochondriacal symptoms, together with gout, apoplexy, palsy, glandular obstructions, and many other complaints incident to inactive, indolent, and sedentary persons, come on.

Nothing but regular and sufficient exercise in the open air can brace and strengthen the muscles and nerves, or prevent the endless train of diseases which proceed from a relaxed state of these organs. The active and laborious are seldom the subjects of nervous diseases: these are the portions of the sons of affluencé and ease. Riches, indeed, supply many indulgences, but they are at the same time accompanied by many evils; and thus are the good and bad things of this life pretty equally balanced.

Those who wish to enjoy health should use exercise as regularly as they take their food: they should walk a certain distance in the open air every day, or ride on horseback; and probably they may find it to their advantage to employ some portion of the day besides in gardening, or some agricultural pursuit. The studious, and men of letters more particularly are required to attend to these points; for if study be united with a want of exercise, it infallibly proves injurious to health, and never fails to destroy the appetite and impair digestion; then costiveness, flatulency, crudities, head-ache, apoplexy, and palsy, are the certain consequences. Exertion of the mind and inaction of the body, when carried to excess, are destructive of the most robust health. An alternate mixture of daily and sufficient exercise, business and reading, enables us to allow rest by turns to the body and the mind; and keeps the faculties in due equilibrium, and in a state of progressive improvement.

To render exercise as beneficial as possible, it will be necessary that it be not too violent, and that moderation both in eating and drinking accompany it. Violent exercise, which either heats the body, fatigues it, or exhausts the spirits and muscular strength, is sure to be hurtful. Active exercise soon after eating a full meal, is likely also to be injurious: a state of quietude, therefore, for some time after dinner in particular, as being the principal meal with most persons, will be advisable, but nevertheless we should not indulge in sleep soon after eating. This custom some people practise, but it is an improper one, particularly for those of a full habit.

Exercise certainly gives strength and energy to the body, but it should not be carried too far, or be continued too long, as it may then be productive of mischief instead of benefit. It should be gentle and moderate, and when practicable, be taken in the open air. Another rule necessary to be attended to for rendering exercise advantageous is, that due care be taken that the body, when heated, be not suddenly exposed to cold, either by subjecting it to currents of air, or fresh breezes, or by drinking cold liquors of any kind. In warm climates, exercise should always be taken in the cool of the day, particularly in the morning.

We may consider exercise of the body as of three kinds. First, that of simple muscular motion, consisting in walking, or such employments as call forth the exertion of the limbs, as fencing, dancing, gardening, digging, hunting, shooting, cricket, playing ball, pitching quoits, and

the like. Secondly, that which is obtained by riding on horseback, or in any kind of carriage; and thirdly, that which may be given to the body by outward applications, such as frictions, either with the hand, a flesh brush, or a piece of flannel.

Exercises of the first kind are highly beneficial when the bodily powers will admit of them, as the mind being occupied therein adds very materially to the advantages resulting from them; yet, on account of their being more fatiguing and laborious, there are many instances where they are scarcely admissible, in which case, riding must be substituted in their stead. Of all the different species of exercise not taken on foot, that of riding on horseback is certainly entitled to the preference, if the person is capable of using it. In nervous affections of all kinds, but more particularly the hypochondriac, as well as obstructions in any of the internal organs, it is more likely to be beneficial than any other, from the parts being universally shook by it, and such persons ought to pass two or three hours every day on horseback when the weather is not wet.

Next to riding on horseback, a preference should be given to an open carriage of some kind or other, as a person has the advantage of continually changing the air and breathing it pure, the importance of which must be obvious, as well as beholding the diversity of scenery and country.

It now and then happens, however, that the motion of either a horse or carriage, be it ever so expertly hung, is too much for the delicate frames of some invalids. In such cases, easy exercise may be obtained by sailing in a small vessel or boat, at proper times of the day when the weather is fine; but when not so, swinging in a cot or hammock may be substituted.

A person who is prevented from taking exercise in the open air, by inclemency of the weather, or other causes, should by no means remain in a continued state of inactivity; he should engage in some employment, or active amusement within doors. Where the taste and inclination extend to any mechanical pursuit, such as that of turning, &c. it ought to be indulged; but where they do not, what are called dumb bells may be substituted for a considerable space of time each day; or the person may play at biliards, or any thing else, rather than take no exercise at all.

In cities, the exercises which are most suitable to the habits of the people and their opportunities, are, for men, the practice of walking, playing ball, and the gymnastics which have lately been introduced from Germany, and which were in the highest estimation among the Greeks in former days, and to which, in a great measure is to be attributed their fine healthy and efficient forms which have come down to us in their statues.

The third species of exercise which has been mentioned, is that of frictions, and where the circulation is languid, and the motion of the other fluids sluggish, or there is an inability of muscular motion from any paralytic affection, these may be employed with much advantage, and in the latter instance, still more so, if conjoined either with electricity or galvanism. Frictions may be made either with a piece of flan-

nel, the flesh-brush, or simply with the hand; and the best time for employing them, seems to be in the morning, at the time of rising from bed; for then the superfluous matter which is prepared for perspiration, is more readily brought to the surface of the body. In the application of this species of exercise, if we commence the friction from the extremities upwards to the body, we shall thereby accelerate the circulation, and propel the blood into the finer branches of the minute vessels.

In every stage and state of life, exercise is necessary for our welfare and health, and it is equally as requisite for those of the female sex as for the male part of the creation. By food our bodies may be nourished; but if not assisted by due exercise to carry on the digestion of it with advantage, and help in throwing off the superfluous humours by perspiration, we must, unavoidably feel all the inconveniences of repletion and fullness in the blood vessels, whilst at the same time the body will be afflicted with many painful diseases.

Indolence, moreover, not only occasions diseases, and renders men useless to society, but promotes all manner of vice. Indolence, when indulged, gains ground; and at length becomes agreeable; hence, many who were fond of exercise in the early part of life, become somewhat averse from it when more advanced in years. This is the case with most gouty and hypochondriacal people, which, in a great measure, renders their diseases more untractable, if not incurable. Idleness may well be said to be the root of many evils; and I think we may safely alledge, that, on the contrary, a life of activity and industry is not only the greatest prompter as well as preservative of health at all periods of our mortal existence, but likewise one of the best guardians of virtue.

No piece of indolence hurts the health more than the modern custom of lying a-bed too long in the morning. This is the general practice in great towns. The inhabitants of cities seldom rise before eight or nine o'clock; but the morning is undoubtedly the best time for exercise, while the stomach is empty, and the body refreshed with sleep. Besides, the morning air braces and strengthens the nerves, and, in some measure, answers the purpose of a cold bath. Let any one who has been accustomed to lie a-bed till eight or nine o'clock, rise by six or seven, spend a couple of hours in walking, riding, or any active diversion without doors, and he will find his spirits cheerful and serene through the day, his appetite keen, and his body braced and strengthened. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

The age of sixty may in general be looked upon as the commencement of senility, and about this period of life it commonly happens that some signs of bodily infirmity begin to appear. To the constitutions of such persons moderate quietude is most suitable, since the springs of life in them are rather weakened than invigorated by excessive or severe action.

CHAPTER VI.

CLOTHING.

THOSE who wish to pay a due regard to their health, must attend to their clothing. It should be adapted to the climate, the season of the year, age, &c.

Climate.

The principal object of clothing, is to preserve a right temperature of the body. Hence persons in very cold, require much more clothing than those in warm, climates. Custom or habit, however, has a great influence. The natives of this country live throughout the most rigorous winters, almost without any clothing, while we apparently experience more suffering with a very great quantity of clothing.

Age.

Youth, in consequence of the rapid circulation of the blood, require less clothing than middle and old age.

Season.

The dress should be adapted to the season of the year, as every one knows that winter requires much more clothing, than summer. But the greatest caution is necessary to make the change very gradually. Woolen garments should be put on early in the fall, and worn late in the spring. This is the more necessary, by reason of the sudden and great changes of our climate. One day the thermometer rises to an hundred; the next it sinks to forty; which racks the constitution, and proves very destructive to health. These vicissitudes must be guarded against by proper clothing, which should never be very thin, even in midsummer.

Fashion and Figure.

More consequence is now attached to figure and form, than to health and convenience. Persons must dress fashionable, no matter how *ridiculous* or dangerous it may prove. Hence fashion and shape are continually changing, without regard to health, climate, or comfort. In order to *reduce* the body to a *fine shape*, the stomach and bowels are *squeezed* into as narrow a compass as possible. By this reprehensible practice, indigestion, fainting, coughs, consumption, and other complaints, are produced.

Tight Lacing, Bandaging, &c.

Garters, when drawn too tight, not only prevent the free motion and use of the parts about which they are bound, but likewise obstruct the circulation of the blood, which prevents the equal nourishment and

growth of these parts, and occasions various diseases. Tight bandages about the neck, as stocks, cravats, necklaces, &c. are extremely dangerous. They obstruct the blood in its course from the brain, by which means head-aches, vertigoes, apoplexies, and other fatal diseases, are often occasioned.

Quantity of Clothing.

A judicious physician in speaking upon this subject, has the following excellent remarks: "Robust persons are able to endure cold better than the delicate, consequently may clothe lighter; but the precise quantity of apparel which may be necessary for any person cannot be determined by reasoning. It must be entirely a matter of experience, and every person is the best judge for him or herself what quantity of clothes is necessary to keep him or her sufficiently warm and comfortable. The state so nearly approaching to absolute nudity, in which fashionable females now make their appearance in public, is not only highly indecent, but must be very destructive of their health and personal comfort.

"Whilst treating on clothing, I would recommend it to every person to be careful in observing that their linen is properly dried previous to its being put on. This precaution will be particularly necessary in the winter months, as washerwomen are then obliged to dry chiefly by the heat of a fire, and this is apt to be very imperfectly done. Many lives are annually sacrificed by persons putting on damp linen, as well as by sleeping in sheets not properly dried.

"Another observation which I think it necessary to make on the present subject is, that due care should be taken to change the stockings and other clothing as speedily as possible after their becoming wet by any exposure to inclement weather, rain, snow, &c. Many persons are so imprudent as to neglect this very necessary change, and to suffer their clothes, after such an exposure, to dry on them, assisted, probably by going near a fire for some time; but such a practice is always attended with risk, and not unfrequently gives rise either to rheumatism, fever, pleurisy, cough, consumption, or some other disease of a dangerous, or even fatal nature."

Kind of Dress.

I shall say but little upon the *kind* of clothing which ought to be worn, but leave this part of the subject to the good sense of the reader, to determine. I would merely add, that such articles must be used as will render the temperature of the body as uniform as possible, by keeping up a due degree of perspiration. Nothing contributes more to this than flannel.

"A very ingenious philosopher, (Sir Benjamin Thompson) by a variety of experiments on the relative power of absorbing moisture from the atmosphere, in different substances; as wool, fur, hair, silk, cotton wool, and linen; has found, contrary to what was supposed wou'd be the result, that woollen cloth absorbed most of these substances, and linen the least; and hence this gentleman justly infers the vast advantage of a flannel waistcoat next the skin; and, from personal experience, and accurate analogy, he concludes that it would prevent a multitude of dis-

eases; and as it promotes evaporation, instead of being too hot for summer, he found no inconvenience from it in the hottest weather, as it is well known that evaporation produces positive cold; hence probably it is that the East Indians find cotton shirts and shifts to be more comfortable than linen."

Females of a delicate constitution really require some under clothing in addition to what is usually worn; and I would therefore recommend them drawers or sliders of flannel. Some persons, particularly invalids, may wear flannel throughout the year.

I think it is much better to wear flannel over the shirt, than next to the skin. It is certainly more pleasant, and besides, it seems to maintain a more uniform, and equal heat of the body. I have proved this by many years experience, and I have just learned that the late Professor Smith of New Haven, advanced the same opinion. A flannel waistcoat early in the fall, and as the weather grows colder, flannel drawers, should be worn; and they should be discontinued in the same order of time. By this course, the transition from one extreme to the other is not so great. It is better to wear cotton next to the skin, than linen, as the latter when moistened with perspiration from great heat or exercise, gives a sense of chillness as the body cools; whereas cotton, by its absorbing properties, prevents any such effects.

Flannel, by all means, should be taken off at night, otherwise the skin becomes too much accustomed to its stimulus, and its beneficial effects in some degree, lost. Not only so, if flannel is worn at night, the system becomes more susceptible of cold after rising from the bed, and exposure to the atmosphere. Flannel should be worn during the day, to defend the system from a sudden contact of cold, which it does admirably, by absorbing perspirable matter, thereby preventing too sudden evaporation, and in this manner, a uniform temperature is maintained.

Imprudent persons have lost their lives by taking off their flannel too early in the spring, merely because a day or two of warm weather commenced, which rendered it a little unpleasant. If it is not worn constantly, it should be at least continued till the beginning of summer, and again put on by the first of September, in this latitude at least.

In the sultry days of summer, every precaution should be taken that the body be not suddenly exposed to cold when overheated by exercise, by throwing off a portion of our clothing, as is very customary with many.

It is lamentable to see the great departure there is now from the former modes of dress, as well as in other respects. Our ancestors were in the practice of dressing very warm, and comfortable; stout cloaks, thick shoes, &c. and they in consequence were healthy. In these days it is the reverse. By the present mode or fashion in dress, thousands of females are injured if not killed.

In concluding this chapter, I will quote the remarks of Buchan on this subject. "Nothing," says he, "can be more ridiculous, than for any one to make himself a slave to fine clothes. Such a one, and many such there are, would rather remain as fixed as a statue from morning till night, than discompose a single hair, or alter the position of a pin. Were we to recommend any particular pattern for dress, it would be

that which is worn by the people called quakers. They are always neat, clean, and often elegant, without any thing superfluous. What others lay out upon tawdry laces, ruffles, and ribands, they bestow upon superior cleanliness. Finery is only the affectation of dress, and very often covers a great deal of dirt."

The remarks of the celebrated Cobbett on dress, occurs to me, and although not immediately connected with the preservation of health, affords a useful lesson. "Let your dress be as cheap as may be without shabbiness; attend more to the colour of your shirt, than to the gloss or texture of your coat; be always clean as your situation will, without inconvenience, permit; but never, no, not for one moment believe, that any human being with sense in his skull, will love or respect you on account of your fine or costly clothes."

CHAPTER VII.

CLEANLINESS.

THOSE who wish to preserve their health, must attend strictly to cleanliness. Few things are of more importance to society, and should be attended to every where among all classes. By reference to Deuteronomy, chapter 22, 12th and 13th verses, it will be seen that the Jews, during their incampments in the wilderness, received particular instructions with respect to it, and these instructions ought to be obeyed by every one. It appears that the whole system of laws delivered to that people, has a tendency to promote cleanliness.

In the most eastern countries, cleanliness makes a great part of their religion. Mahometan, as well as the Jewish religion, enjoins various bathings, washings, and purifications.

Although these might be designed to represent inward purity, yet at the same time, they are calculated for the preservation of health. It is rightly said, that the want of cleanliness is a fault which admits of no excuse, for where water can be had for nothing, it is in the power of every one to be clean.

The continual discharge from our bodies by perspiration, renders frequent change of apparel necessary. Changing apparel greatly promotes the secretion from the skin, so necessary for health. When that matter which ought to be carried off by perspiration, is either retained in the body or re-absorbed from dirty clothes, it must occasion diseases.

Diseases occasioned by the want of Cleanliness.

Many complaints are caused by want of cleanliness. Fevers, dysenteries, and diseases of the skin, often arise from filth, and they may be mitigated, or cured, by a strict regard to cleanliness.

Filthy Persons and Apartments.

It is well known that the itch and vermin attack those whose apartments and persons are filthy, by which they become a common nuisance. Some of the habitations of the lower classes of persons, particularly of our cities, are so dirty that the most disagreeable and foetid affluvia is emitted from them. If such persons are too indolent to remove the filth about them, ought not magistrates to interfere, and cause it to be done?

Filthy Cities and Streets.

Some cities are almost proverbial for their filthiness, and I know of none more so than the city of New-York, notwithstanding the great sums that are paid for the purpose of keeping it clean. While the most popular streets are kept clean, there is such a stench arising from others, that a person in passing them, is often obliged to suspend the functions of his lungs, or in other words, obliged to "hold his breath." What effect such deleterious gases must have upon the health, I leave the reader to judge.

The same filthiness exists around our markets, docks, &c. If our Corporation have not ingenuity enough to keep our streets and docks clean, I will mention a method which is infallible, and it is that practised in some of the great cities of Europe; a method which renders the streets so perfectly clean, that every traveller is forcibly impressed with it; and it is this. Let there be a sufficient number of scavengers, or men, to only a small portion of a street, and let the overseer, or superintendent see that every particle of filth and dirt which is there accumulated, is not only scraped, and swept into a pile, but likewise removed, and if this every other day is not sufficient to keep it clean, it is done daily. By this means, every street in the city is perfectly sweet and clean. It is true, the expense may be a trifle more, but what is this compared to the health of our citizens.

A writer has the following judicious remarks upon this subject.

"In many great towns the streets are little better than dung-hills, being frequently covered with ashes, dung, and nastiness of every kind. Even slaughter-houses are often to be seen in the very centre of great cities. The putrid blood, excrements, &c. with which these places are generally covered, cannot fail to taint the air, and render it unwholesome. How easily might this be prevented by active magistrates, who have it always in their power to make proper laws relative to things of this nature, and to enforce the observance of them?

Whatever pretensions people may make to learning, politeness, or civilization, we will venture to affirm, that while they neglect cleanliness, they are in a state of barbarity.

In ancient Rome the greatest men did not think cleanliness an object unworthy of their attention. Pliny says, the *Cloaca*, or common sewers for the conveyance of filth and nastiness from the city, were the greatest of all the public works; and bestows higher encomiums upon Tarquinius, Agrippa, and others who made and improved them, than those who achieved the greatest conquests.

How truly great does the Emperor Trajan appear when giving direc-

tions to Pliny his proconsul, concerning the making of a common sewer for the health and convenience of a conquered city!

As it is impossible to be thoroughly clean without a sufficient quantity of water, we would earnestly recommend it to the magistrates of great towns to be particularly attentive to this article. Most great towns and cities are so situated as to be easily supplied with water; and those persons who will not make a proper use of it after it is brought to their hand, certainly deserve to be severely punished. The streets of great towns, where water can be had, ought to be washed every day. This is the only effectual method of keeping them thoroughly clean; and, upon trial, we are persuaded it will be found the cheapest."

Some of the most dreadful diseases incident to human nature might, in my opinion, be entirely eradicated by cleanliness.

Personal Cleanliness.

Personal cleanliness, says a writer, is chiefly effected by a frequent change of dress, but is much increased by ablutions of different parts of the body daily with water. Of these the head, face, and mouth, as well as the hands and feet, claim our particular attention. From neglecting to keep the mouth, teeth, tongue, and throat properly cleaned, the breath is apt to acquire a disagreeable taint. The teeth ought, therefore, to be cleansed after every meal, as the refuse of the food naturally settles about them, and in consequence of heat, rapidly becomes putrid, and in this state, proves injurious to them as well as the gums. Every morning the tongue should be cleansed, and the throat be well gargled, and washed out with water.

The teeth are apt to become incrustated with tartar, which in time vere much injures the enamel with which they are coated externally: it should not, therefore, be suffered to collect, but be removed from time to time. They should be washed every morning with a small piece of sponge, or very soft brush dipped in cold water, joining occasionally the powder of fresh prepared charcoal. If any of the teeth have a tendency to caries or rottenness, or the gums are spongy and bleed, the mouth may be washed with the tincture of myrrh.

Attention to the feet is also very necessary, particularly in warm weather, and with those who from a peculiarity of constitution have them very moist. The perspiration proceeding from them in hot weather, and after much walking, emits a very disagreeable smell: they ought, therefore, to be frequently washed, but no means for stopping the discharge should be resorted to, as by drying it up, serious diseases might be induced. Great cleanliness by daily ablutions of the feet, and the change of stockings, are not only the most convenient, but the most salutary means of preventing all unpleasantries."

The most rigid cleanliness must also be observed during sickness. The clothes of the person must be frequently changed, every thing offensive removed, and the apartment must be kept perfectly clean.

Mechanics, and those who are under the necessity of working where there is constant dirt and filth, ought to wash themselves, and change their clothing as often as possible. They should frequently bathe both in the summer and winter season.

I shall here quote the remarks of Mr. Jefferson, to show the great benefit derived from frequently bathing the feet, as well as to show the great advantage derived from an observance of the preceding rules and maxims on health.

“I have lived temperately, eating little animal food, and that not as an aliment so much as a condiment for the vegetables, which constitute my principal diet. I double, however, the doctor’s glass and half of wine, and even treble it with a friend; but halve its effects by drinking weak wines only. The ardent wines I cannot drink, nor do I use ardent spirits in any form. Malt liquors and cider are my table drinks, and my breakfast is of tea and coffee. I have been blest with organs of digestion which accept and concoct, without ever murmuring, whatever the palate chooses to consign to them; and I have not yet lost a tooth by age. I was a hard student until I entered on the business of life, the duties of which leave no idle time to those disposed to fulfil them; and now, retired, and at the age of seventy-six, I am again a hard student. Indeed, my fondness for reading and study revolts me from the drudgery of letter writing; and a stiff wrist, the consequence of an early dislocation, makes writing both slow and painful. I am not so regular in my sleep as the doctor says he was, devoting to it from five to eight hours, according as my company, or the book I am reading interests me; and I never go to bed without an hour or half hour’s previous reading of something moral whereon to ruminate in the intervals of sleep. But whether I retire to bed early or late, I rise with the sun. I use spectacles at night, but not necessarily in the day, unless in reading small print. My hearing is distinct in particular conversation, but confused when several voices cross each other, which unfits me for the society of the table. I have been more fortunate than my friend in the article of health: so free from catarrhs, that I have not had one, (in the breast, I mean,) on an average of eight or ten years through life. I ascribe this exception partly to the habit of bathing my feet in cold water every morning, for sixty years past. A fever of more than twenty-four hours, I have not had above two or three times in my life. A periodical head-ache has afflicted me occasionally, once, perhaps, in six or eight hours, for two or three weeks at a time, which seems now to have left me;—and, except on a late occasion of indisposition, I enjoyed good health—too feeble, indeed, to walk much, but riding without fatigue, six or eight miles a day, and sometimes thirty or forty.”

CHAPTER VIII.

SLEEP, EARLY RISING, &c.

“FOR the purpose,” says Dr. Thomas, “of recruiting the waste daily produced in the human body, and enabling it to perform every function properly, nature has wisely and beneficially determined that an adequate renovation should succeed this exhaustion, by alternate periods of sleep and watching.

An insufficient quantity of sleep exhausts the spirits and produces head-ache, anxiety of mind, and moroseness of temper; moreover it debilitates the nervous system. On the contrary, too great an indulgence in sleep is also injurious, as the muscular motions are thereby debilitated, the nerves and other fibres become relaxed or torpid, and a state of indolent stupidity supervenes, which is not thrown off the whole day; added to which, that sprightliness of life and vivacity are wanting, which are usually the consequences of early rising. It is evident, therefore, that sleep requires some regulation as well as our diet. A habit of retiring soon to rest, and of rising early, appears to be very favourable to the developement of the powers and the preservation of health. Those who lie half of the day in bed, become effeminate and enervated, and they soon lose that activity, which, properly directed, can alone confer value on life.

It would appear that six hours sleep every night is sufficient for any adult person during the summer, who is in health, and in winter about seven, or at the most eight. Those who indulge for nine or ten hours in bed, are commonly wakeful or restless during the fore part of the night; and when they ought to rise, sink to rest and slumber on till noon, by which imprudent conduct, even the strongest constitution will eventually be injured.

Nothing, however, more certainly destroys the constitution than that of sitting up a great part of the night, and lying in bed the pleasantest and most healthy part of the day, as is too much the custom with those who lead a fashionable life, thereby converting night into day, and day into night. This plan of proceeding is sure to injure the health of its votaries, and to shorten the natural period of life, and it will undermine the strongest constitution, even if accompanied with habits of regularity in other respects; but how much more destructive must its effects be, when conjoined with intoxication, gambling, sensuality, and other midnight excesses. Persons of athletic bodies may probably bear up for a time under late hours and intemperance, but the delicate and weakly must unavoidably fall very soon martyrs to such indiscretions.

It is, indeed, melancholy to observe among the votaries of fashion and dissipation, the ill effects produced on their constitutions by their midnight revels. Let any person view their pallid countenances where

rouge is not resorted to, as well as their ghastly forms, and they will be well satisfied that inverting the established order of things, by turning night into day, soon robs the blooming cheek of its roses and lilies, brings on early decay in process of time, and destroys the most vigorous frame.

A due proportion of sleep, taken at proper hours, is absolutely necessary for the welfare of our bodies, which during this period receive a considerable degree of nourishment and renovation: if, however, it be too short, interrupted, or taken at unseasonable hours, debility ensues, and the vital powers, sustaining a deprivation of adequate supply of nourishment, are exposed to injury. A person from this cause will be likely to feel a great degree of languor and weariness when he rises, instead of proper refreshment. It must be evident to every person that a considerable portion of human happiness is founded on the alternate vicissitudes of motion and rest: those, therefore, who neglect the latter, will rarely be gratified by the relish resulting from the former.

We should avoid sleeping in those apartments where we live during the day, and for a bed-chamber make choice of a spacious room exposed to the sun, and that can have the windows opened in the day-time for the admission of pure air and the dispersion of vapours collected during the night. To secure ourselves from the effects of a vitiated atmosphere, we ought also to take care that the beds are well shaken up every morning; and that these, as well as the bed-clothes, are freely exposed for a due length of time to the air.

Children may always be allowed to take as much sleep as they please, but it is a very different case with adults of a youthful age. Quietude and repose best, however, become the constitutions of those who are far advanced in years, since the springs of life in them are rather weakened than invigorated by excessive action and want of sufficient sleep.

The best way of making sleep refreshing, is to take proper exercise through the day: to avoid strong infusions of tea or coffee in the evening; to make a very light supper at least an hour or two before retiring to rest, where such a meal is indispensably necessary; to go early to bed; to lie down with a mind as serene and cheerful as possible, placing the body in the position which is most congenial to the feelings and habits of the individual; and to rise betimes in the morning; for it has been observed that the most of those who have attained a great age, have generally been early risers. It must however be understood, that although early rising and activity are conducive to health, they should nevertheless be regulated by the state of bodily strength, the season of the year, and the habitual exertions of the mind.

Too much exercise will prevent sleep as well as too little. We very seldom hear, however, of the active and laborious complaining of restless nights: it is the indolent and slothful who are generally incommoded with these complaints. The labourer enjoys more real luxury in sound sleep and plain food than he who fares sumptuously and reposes on downy pillows, where due exercise is wanting.

Light suppers are also necessary to sound sleep; and many there are who experience uneasy and restless nights, if they commit the least excess at that meal, and when they do fall asleep, the load and oppression

on their stomach occasion frightful dreams, the night mare, broken and disturbed rest. Some people cannot sleep, however, unless they have taken solid food at night, and this perhaps merely from habit or custom; but in such cases the very lightest should be chosen, and only a very moderate quantity be eaten, taking care at the same time that an hour or two shall always elapse prior to getting into bed. Indeed, it would always be advisable after eating such a supper to take a little gentle exercise before the person retires to rest.

Those who follow intellectual pursuits with immoderate ardour, exhaust their powers, and speedily are visited by premature old age,—Shun, therefore, close meditation and intense study by nights.

Anxiety of mind, and intense thinking, are almost certain to prevent sound sleep; and therefore we should endeavour to preserve tranquillity of mind, and banish anxious thoughts as much as possible, when we retire to rest, calling in the aid of philosophy to bear with due fortitude and resignation those ills which we cannot prevent.

He that goes to bed early at night will in general be desirous of rising betimes in the morning: moreover, he that accustoms himself to an early hour for retiring to rest, can rarely join in Bacchanalian revels, nor in the fashionable dissipations of high life: his sleep is not disturbed by the effects of unseasonable luxury; his slumbers are sound and refreshing; and he rises with cheerfulness and fresh acquired vigour to breathe the morning air, and commence the duties of the day."

CHAPTER IX.

OCCUPATIONS.

It is well known that certain kinds of business materially injure the health. Every kind which requires confinement and little motion exerts a baneful influence on the system, such as shoe-makers, tailors, mantua-makers, &c.

Many are injured by the air of some occupations being impregnated with certain deleterious matters; type-founders, printers, stone-cutters, millers, chemists, forgers, glass-blowers, miners, and other artists, painters, gilders, manufacturers of white and red lead, &c. The persons last mentioned, should take frequently a dose of olive oil, or castor oil to prevent the painter's cholic.

Sedentary and studious persons are very liable to have their health impaired by continuing too long in one position, or for the want of proper exercise.

Watch-makers, in consequence of their sedentary habits, are liable to a peculiar species of disease, to which many of them fall victims. Its commencement is indicated by deficient appetite and eructations of wind from the stomach. There is also sallowness of complexion, and a muddy yellow appearance of the eyes. In the progress of the disease great quantities of black coagulated blood is discharged by stool, and occasionally by vomit. On dissection, the whole intestinal canal is found replete with blood either fluid or black and coagulated. The liver and the spleen appear soft, and as it were rotten.

In its more early stages, this disease admits of being checked by active purgatives, exercise, and country air.

Dr. Buchan gives the following judicious advice to persons of this description, and those who lead a sedentary life.

"Instead of multiplying rules for preserving the health of the sedentary, we shall recommend them to the following general plan, viz. That every person who follows a sedentary employment should cultivate a piece of ground with his own hands. This he might dig, plant, sow, and weed at leisure hours, so as to make it both an exercise and amusement, while it produced many of the necessities of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle."

Cultivating the ground is every way conducive to health. It not only gives exercise to every part of the body, but the very smell of the earth and fresh herbs revives and cheers the spirits, whilst the perpetual prospect of something coming to maturity delights and entertains the mind. We are so formed as to be always pleased with somewhat in perspective, however distant or however trivial; hence the happiness that most men feel in planting, sowing, building, &c. These seem to have been the chief employments of the more early ages; and, when

kings and conquerors cultivated the ground, there is reason to believe that they knew as well wherein true happiness consisted as we do."

It may seem romantic to recommend gardening to manufacturers in great towns; but observation proves that the plan is very practicable. This practice has many salutary effects. It not only induces these people to take exercise without doors, but also to eat many greens, roots, &c. of their own growth, which they would never think of purchasing.

Mechanics are too much inclined to crowd into great towns. The situation may have some advantages; but it has likewise many disadvantages. All mechanics who live in the country have it in their power to cultivate a piece of ground; which, indeed, most of them do. This not only gives them exercise, but enables them to live more comfortably. So far at least as my observation extends, mechanics who live in the country are far more happy than those in great towns, they enjoy better health, and live in greater affluence.

In a word, exercise without doors, in one shape or another, is absolutely necessary to health. Those who neglect it, though they may for a while drag out life, can hardly be said to enjoy it. Weak and effeminate, they languish for a few years, and soon drop into an untimely grave.

Intense study is so destructive to health, that few instances can be produced of studious persons who are strong and healthy. Hard study always implies a sedentary life; and when intense thinking is joined to the want of exercise, the consequences must be injurious. We have frequently known even a few months of close application to study, ruin an excellent constitution, by inducing a train of nervous complaints which could never be removed. Man is evidently not formed for continual thought more than for perpetual action, and would be as soon worn out by the one as by the other.

So great is the power of the mind over the body, that, by its influence, the whole vital motions may be accelerated or retarded to almost any degree. Thus, cheerfulness and mirth quicken the circulation, and promote all the secretions; whereas sadness and profound thought never fail to retard them. Hence it would appear, that even a degree of thoughtlessness is necessary to health. Indeed the perpetual thinker seldom enjoys either health or spirits; while the person who can hardly be said to think at all, generally enjoys both.

Perpetual thinkers, as they are called, seldom think long. In a few years they generally become quite stupid, and exhibit a melancholy proof how readily the greatest blessings may be abused. Thinking, like every thing else, when carried to extreme, becomes a vice; nor can any thing afford a greater proof of wisdom, than for a man frequently and seasonably to unbend his mind. This may generally be done by mixing in cheerful company, active diversions, and a change of scenery."

I would recommend to merchants, clerks, and all classes of citizens, who are very much confined, to rise very early, and as often as possible to walk or ride into the country.

CHAPTER X.

TRANSITIONS FROM HEAT TO COLD.

MOST of our diseases arise from a sudden transition from heat to cold. The sudden application of cold to the body in a state of perspiration, cannot but be fraught with danger. The pores become closed, perspirable matter retained, which proves a source of irritation to the system, and soon terminates in a departure from health. And this is generally brought about by a sudden transition from a high to a low degree of temperature. The system is capable of undergoing an intense degree of cold, when it is *gradually* brought under the influence of it; but when it is *suddenly* applied, such a shock is given to the body that it rarely escapes without receiving injury; from which we may infer the great necessity of care and caution against sudden transitions from heat to cold. A sensible writer has the following remarks upon this subject:—

By cold air, the human body is considerably contracted and rendered more compact; which is very obvious by observing that the same clothing which in summer sits tight will in the winter be too large. In proportion, therefore, as the external heat is diminished, it would appear nature intended that the internal heat should be increased thereby. In winter the blood is much disposed to inflammation; and becoming, in some measure, obstructed in its passage through the lungs, produces coughs, pleurisy, inflammation of the organs of respiration, rheumatism, and inflammatory sore throat. By paying attention, however, to a proper degree of clothing, and taking particular care that a due proportion of exercise be not neglected, cold may be rendered less hurtful to the body, and the risk of incurring these dangerous complaints in a great measure be obviated.

The effects of extreme cold are, however, sometimes destructive to the human frame, as in northern countries persons have been known to drop down suddenly, and be deprived of life without any previous symptoms of disease. The loss of various parts of the body in persons of the most healthy constitution, by the effect of extreme cold, is well known. The toes, fingers, lips, and nose, are frequently so far exposed to its effects, as to induce a mortification in these parts.

There is no change throughout nature more pernicious either to animal or vegetable bodies than from extreme heat to intense cold, or from freezing to sudden thawing, and the opposite of these. Hence, it has been observed, that irritating coughs are never so prevalent as when there are sudden alterations of the weather, and when the air, after having been very cold, suddenly becomes warm and damp, and after that assumes a considerable degree of coldness again. These transitions occasion a smaller quantity of matter to be thrown off by perspiration, and the lodgment of a greater proportion of fluids upon the internal

parts, which become loaded and obstructed; hence catarrhs, diarrhæa, and many other diseases.

When any ordinary change of external temperature is made gradually, such is the constitution of the healthy human frame that it bears it with impunity; but when it happens more rapidly, danger arises, proportioned to the suddenness of the event.

The most dangerous, however, of all, are those rapid and violent fluctuations which arise from the artificial modes of influencing temperature by the close rooms and fires of refined life, as also by the clothing. There are many thoughtless persons who will rush out into the freezing air from a room heated to the temperature of India, or after having been warmly clad throughout the day, will go out into the cold damp air of night in the flimsy dress of a ball-room, with their bosoms uncovered, and their necks and shoulders perfectly bare; for such is the prevailing fashion among women nearly of all ages. They are never *more dressed*, according to their ideas, than when thus equipped for some place of amusement, although, in fact, they very nearly approach a state of nudity. It is by such imprudences, and the changes of temperature to which they become liable, that so many thousands are annually cut off by one disease or another, but particularly by pulmonary consumption.

But we are now so accustomed, to hear of colds, coughs, consumptions, rheumatism, and a long train of other diseases of a similar nature, that we have nearly been brought to consider them as the necessary attendants of our situations, the unavoidable scourges of our climate and land, the existence of which we may deplore, but against which it is almost useless to employ any precaution. It is a positive fact, however, that most of our winter maladies derive their origin from sudden and considerable vicissitudes of temperature, and may, perhaps, be avoided by paying due attention to the following rule: viz. To keep the temperature of the atmosphere which surrounds us as uniform as possible, and when a change is unavoidable, to make it gradually, and not suddenly. A due attention should, therefore, be paid to our clothing, and management in other respects, on quitting our houses, or coming out of any crowded place of public resort in cold weather. Persons of a delicate constitution will find it much to their advantage to pay attention to the changing of their clothes according to the vicissitudes of the season, or even, indeed, to those of the same day, proportioning not only the quality, but quantity thereto.

As our bodies are readily acted upon by every sudden change of weather, as from heat to cold, and the reverse of this, every precaution should be taken, for the purpose of preventing any sudden check to perspiration; and it should be a fixed rule, to avoid all rapid transitions from one extreme to another, and never to remove from a room which is highly heated, to a cold air, or fresh breeze, while the body remains warm, or till the necessary change by additional clothing has been previously made. If, at any time, the body should be greatly heated during the warm weather, it will be sure to suffer by going into a cellar, ice-house, or cold bath, or even by sitting on cold stones, or ground that is damp. Severe colds, pulmonary consumption, rheumatism, and many other maladies of a severe nature, have been brought

on by such imprudence, and even speedy death has been the consequence of such a transgression."

Wet Clothes.

Another writer treating on obstructed perspiration, has the following pertinent remarks: "Wet clothes not only by their coldness obstruct the perspiration, but their moisture, by being absorbed, or taken up into the body, greatly increases the danger. The most robust constitution is not proof against the danger arising from wet clothes; they daily occasion fevers, rheumatisms, and other fatal disorders, even in the young and healthy.

It is impossible for people who go frequently abroad, to avoid sometimes being wet. But the danger might generally be lessened, if not wholly prevented, by changing their clothes soon; when this cannot be done, they should keep in motion till they be dry. So far are many from taking this precaution, that they often sit or lie down in the fields with their clothes wet, and frequently sleep even whole nights in this condition. The frequent instances which we have of the fatal effects of this conduct, ought certainly to deter all from being guilty of it.

Wet Feet.

Wet feet often occasion fatal diseases. The colic, inflammations of the breast and of the bowels, *cholera morbus*, &c. are often occasioned by wet feet. Habit will, no doubt, render this less dangerous; but it ought as far as possible to be avoided. The delicate, and those who are not accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

Night Air.

The perspiration is often obstructed by night air; even in summer this ought to be avoided. The dews which fall plentifully after the hottest day, make the night more dangerous than when the weather is cool. Hence in warm countries, the evening dews are more hurtful than where the climate is more temperate.

It is very agreeable after a warm day to be abroad in a cool evening; but this is a pleasure to be avoided by all who value their health. The effects of evening dews are gradual, indeed, and almost imperceptible; but they are not the less to be dreaded: we would therefore advise travellers, labourers, and all who are much heated by day, carefully to avoid them. When the perspiration has been great, these become dangerous in proportion. By not attending to this, in flat marshy countries, where the exhalations and dews are copious, labourers are often seized with intermitting fevers, quinseys, and other dangerous diseases.

Damp Beds.

Beds become damp, either from their not being used, standing in damp houses, or in rooms without fire, or from the linen not being dry when laid on the bed. Nothing is more to be dreaded by travellers than damp beds, which are very common in all places where fuel is scarce. When a traveller, cold and wet, arrives at an inn, he may,

by means of a good fire, warm diluting liquor, and a dry bed, have the perspiration restored; but if he be put into a cold room, and laid in a damp bed, it will be more obstructed, and the worst consequences will ensue. Travellers should avoid inns which are noted for damp beds, as they would a house infected with the plague, as no man, however robust, is proof against the danger arising from them.

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds which are not slept in above two or three times a-year, should be safe? Nothing is more common than to hear people complain of having caught cold by changing their bed. The reason is obvious: were they careful never to sleep in a bed but what was frequently used, they would seldom find any ill consequences from a change.

That baneful custom, said to be practised in many inns, of damping sheets, and pressing them, in order to save washing, and afterwards laying them on the beds, ought, when discovered, to be punished with the utmost severity. It is really a species of murder, and will often prove as fatal as poison or gun-shot. Indeed no linen, especially if it has been washed in winter, ought to be used till it has been exposed for some time to the fire; nor is this operation less necessary for linen washed in summer, provided it has lain for any length of time. This caution is the more needful, as gentlemen are often exceedingly attentive to what they eat or drink at an inn, yet pay no regard to a circumstance of much more importance. Muslin, is much more healthy than linen, sheets.*

Damp Houses.

Damp houses frequently produce the like ill consequences: for this reason those who build should be careful to choose a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughly dry. All houses, unless where the ground is exceedingly dry, should have the first floor a little raised. Servants and others, who are obliged to live in cellars and sunk stories, seldom continue long in health."

* "If a person suspect that his bed is damp, the simple precaution of taking off the sheets and lying in the blankets, with all, or most of his clothes on, will prevent all the danger. I have practised this for many years, and never have been hurt by damp beds, though no constitution, without care, is proof against their baneful influence.

CHAPTER XI.

EVACUATIONS OR EXCRETIONS.

THE state of our health is materially influenced by the excretions or evacuations of the body. Nature has provided certain outlets for the purpose of carrying off morbid and extraneous matter, which, if retained too long, injures our health.

The Bowels.

It is scarcely necessary to say that costiveness is the cause of many complaints. When the excrements are too long retained in the bowels, they contaminate the fluids, and seldom fail to prove injurious. The bowels, therefore, should be kept regular. We cannot precisely determine how often they should be moved in a given length of time, as this depends upon the constitution, habit, state of the health, and other causes. As a general rule, however, once in twenty-four hours is sufficient, and two days at farthest; but there are instances, where persons are so imprudent as to suffer their bowels to become so constipated, that nothing is discharged in one or two weeks. This is a very dangerous practice. Some persons, from a torpid state of the stomach and intestines, want of exercise, &c. are habitually costive, causing flatulence, swelling of the abdomen, loss of appetite, head-ache, debility, and sometimes convulsions. To such, I would recommend such a course of treatment, diet, and exercise, as will restore a regular action of the bowels. Most persons continually take physic for this state of the system, which injures the tone of the stomach and intestines, and after a while, rather aggravates, than removes the cause.

Remedy for Habitual Costiveness.

A mild purgative may first be administered to remove the accumulation of feculent matter, and it may be occasionally repeated, until costiveness can be removed by other means.

After the operation of the physic, recourse must be had to proper diet. Nothing of a binding or heating nature, must be taken; but, on the contrary, that kind which possesses loosening properties, such as fruit of various kinds, raisins, prunes, figs, dried peaches, apples, whortleberries, &c. and particularly the coarse bread spoken of in a preceding chapter.

Those who are habitually costive, will find great benefit by taking a tumbler of cider before breakfast in the morning. I have seldom or never known it fail to act moderately upon the bowels, and to obviate costiveness. But there is another method which I have practised with great success, which is, when the bowels become constipated, or costive, to use friction with the hand over the stomach and whole belly. Let the parts be daily rubbed for ten or fifteen minutes. This has had an admirable effect, and regulated the bowels when all other means have failed.

The Liver.

The state and quality of the bile must be attended to, in order to preserve health. The bile, in a vitiated state, or when not duly secreted, will sometimes become obstructed in the liver and gall bladder, and become a source of dyspepsia, constipation, and nervous complaints, jaundice, &c. When this is the case, or when a person is possessed of a bilious habit, it should be corrected principally by diet. All high seasoned food and meats, should be avoided, and vegetables substituted. Exercise should by no means be neglected, and one meal of victuals, daily omitted. One or two soda powders may be daily taken, and other aperient, or laxative medicines, if a course of regimen should not prove effectual.

Kidneys.

The kidneys perform an important office, which, if suspended, or imperfectly performed, will affect the health, by inducing inflammation of the kidneys, dropsies, &c. When there is a disposition to pass the urine more frequently than usual, and when there is but a small quantity voided at a time, it is a sure evidence that there is some derangement in the animal economy. Persons, in such a case, should immediately resort to the use of such medicines as stimulate the kidneys, and cause them to secrete a larger quantity of urine, or in other words, to perform their office. An infusion of parsley, of whortleberries, marsh mallows, and other dilutent drinks, should be freely taken. Should there be, however, too great a quantity of urine voided, it will constitute a disease termed *Diabetes*, which requires an opposite course of treatment. If this should be the case, as little drink as possible should be taken, and those of a tonic and astringent nature, such as a decoction of the bark of the wild cherry tree, and beth root.

Some, who are styled urine doctors, pretend to *know* and *cure* diseases *by the inspection of the urine alone*. But this is impossible. So many things tend to change the quality and quantity of urine, as to render it altogether an uncertain criterion, with respect to health or disease.

A writer on this subject has the following excellent remarks: "It has long been an observation among physicians, that the appearances of the urine are very uncertain, and very little to be depended on. No one will be surprised at this, who considers how many ways it may be affected, and, consequently, have its appearance altered. The passions, the state of the atmosphere, the quantity and quality of the food, the exercise, the clothing, the state of the other evacuations, and numberless other causes, are sufficient to induce a change either in the quantity or appearance of the urine. Any one who attends to this will be astonished at the impudence of those daring quacks, who pretend to find out diseases, and prescribe to patients, from the bare inspection of their urine. These impostors, however, are very common in some parts, and, by the amazing credulity of the populace, many of them amass considerable fortunes. Of all the medical prejudices which prevail in this country, that in favour of *urine doctors* is the strongest. The common people have still an unlimited faith in their skill, although it has

been demonstrated that no one of them is able to distinguish the urine of a horse, or any other animal, from that of a man."

The Skin.

Perspiration constitutes the greatest of all the discharges from the body. Sanctorius, an Italian physician, was the first that directed the attention of the faculty to the cutaneous and pulmonary transpiration, which he proved to exceed the other secretions considerably in weight; and he maintained that this function must have a considerable influence on the system, and was deserving of great consideration in the treatment of diseases. From this we may learn what effects must follow its obstruction. No doubt more complaints arise from retained perspirable matter, than from any other cause. It therefore becomes of vast importance to keep up a regular and constant perspiration; for want of a due attention to which, thousands of lives are annually sacrificed.

"Whatever gives a sudden check to perspiration," says Thomas, "may be productive of very injurious consequences, and these should be carefully guarded against, as many persons annually fall a sacrifice to not paying proper attention to the various causes from which perspiration may become obstructed; one of the most common of which is, taking, or catching cold, as it is more usually called.

By sudden transitions from heat to cold, either from changeableness of the weather, the state of the atmosphere, going immediately from a hot room into the cold air, or throwing off some part of the clothing when heated by exercise, the perspiration is very apt to be obstructed; and colds, coughs, and inflammation of the lungs are the usual effects of such conduct. Drinking freely of cold water, or any other small liquor, when the body is heated, is not only injudicious, but fraught with many ill consequences. Damp houses and damp beds, or linen; exposure to night air, especially in hot countries; not changing clothes quickly after their getting wet; and continuing to wear stockings, shoes, or boots, which are saturated with water, exposing the feet thereby to cold, are all likely to be attended with injurious consequences, by occasioning obstructed perspiration. The same will happen by throwing open a window when the room is hot and sitting in or near it, so as to be exposed to a current of air.

Some are so imprudent, or fool hardy, as to bathe themselves in cold water when considerably heated by walking, dancing, or the like exercises; and by such conduct have been soon attacked with some dreadful disease or other. In some instances death has been the consequence."

I shall here give rules to pursue, when perspiration has been obstructed from any cause. If the clothes have been wet, they should be immediately taken off, and dry ones substituted. The feet must be immediately bathed in warm water, and a glass of gin sling, or toddy, taken as hot as possible. After which, an infusion or tea of some medicinal plant may be taken, such as sage, mint, catnip, pennyroyal, hyssop, &c. This course will restore perspiration, and prevent dangerous if not fatal diseases. This is much better than to send for a common physician, to be *bled*, *blistered*, and *mercurialized*!

CHAPTER XII.

THE ABERNETHIAN CODE OF HEALTH AND LONGEVITY.

In the preceding chapters I have treated on most of the subjects connected with the prevention of disease, and the preservation of health. But there are some things, in relation to which, it will be satisfactory to the invalid, to be more explicit. I allude to the digestive functions which exercise such a great controul over the system, that it becomes necessary, in order more fully to develope the true Hygeian principle to enlarge upon. Few are aware of the influence which the stomach and intestines exert in the prevention of disease, and preservation of health. Such ample justice has been done to this subject by the celebrated Dr, John Abernethy, that I shall make no apology for inserting the substance of his remarks.

Symptoms of Faulty Digestion.

The process of digestion then, or the preparation of what we eat and drink, is the great function of the stomach, but this process becomes often impaired or in fault, and the symptoms of imperfect or faulty digestion first appear in that organ or part of the body which is naturally weakest; hence, often the distance of it from the original seat of the disease; and hence, also, the complication of symptoms which mark this primary foundation and source of aliment.

One of the first marks of vitiated digestion is lowness of spirits, or a peculiar languor and lassitude that sickens at exertion, and shows any thing but what are in common language termed good spirits; this is followed by want of rest or disordered sleep, and the person awakes in the morning with a sense of weariness and fatigue, instead of being refreshed; deficiency, or loss of appetite, then ensues, and Nature no longer employs her protecting monitor, in the sensation of hunger, when the organ is thus out of order, or in a torpid state.

To these primary, or leading symptoms, are added a dry, hot skin, occasioning, by the retention of saline matter in the blood, an offensive breath; the tongue also is foul, and in the morning appears covered with a crust, conveying to the person's own sense a bad and disagreeable taste; with these symptoms are joined, also, a heavy, dull countenance, a sallow look, and sympathetic pain in the head.

Symptoms of a Faulty State of the Bowels.

When the bowels partake of this faulty state, they are marked by an irregular action of the canal; if examined, also, the excrementitious matter voided will be found changed in quality, which, in a healthy state, should be neither too solid nor too liquid in consistence, and in colour be like that of rhubarb made into a paste; but in derangement of the digestive process, this matter varies in colour from perfectly

white to black; the former proclaiming a deficiency of bile, and the latter a fault in the liver and large intestines. In this state, there prevails flatulence, irruetation and extrication of gaseous matter, which is never known in health: and hence arise various uneasy symptoms in the stomach and alimentary tube. Indeed in the continued identical structure from the gullet to the rectum, the state of one part is apt to effect that of another, so indigestion occasions flatulence, spasms, and pains in the intestines, and vice versa, the state of the intestines effects the stomach.

Causes of Indigestion.

The causes of imperfect digestion are, all the refinements of civilization, and whatever draws us from a life of nature, or a condition of simplicity in diet and all its attendant auxiliaries. Of these may be enumerated:

First, All stimulants, as spirits, wines, and the too free use of purgative medicines.

Secondly, All liquids in excess, especially when taken warm, for they weaken the tone of the organ, and dilute the gastric juice, lessening its solvent powers; this is the case with tea, punch, and other dilutions; but—

Thirdly, If this is the case with excess of liquids, that of solids is no less pernicious, for gluttony over-distending the stomach, prevents a full secretion of bile.

Thus the pleasures of the table, whenever enjoyed beyond moderation, are purchased at the expense of health. Even the quality of what we take requires equal attention to avoid injury or doing wrong, as well as the quantity, and the more food is deprived of the nourishing principle, the more unfit is it for the purposes of aliment. Hence various experiments have been made on the digestibility of the different substances we eat; but whatever the state of digestibility of such substances, it should be laid down as a maxim, that no food should be submitted to the powers of the stomach without due mastication; for the want of proper and minute divisibility will render all food, whatever its nature, less digestible than it otherwise would be.

This process of mastication properly conducted should reduce the aliment into a soft mass, and mix it intimately with an albuminous fluid, derived from the passages already stated it pervades; but when all this is done, in order to show the mutual sympathy that influences the system, digestion is often interrupted by disorders of different parts, or affections of the *mind*.

This process of digestion, at the time it takes place, seems to be the centre of fluction; nature here concentrates her powers for this great and primary object—the formation of nourishment, and suspends, as it were, for a time, her attention to other parts, till this is prepared; thus as a proof of her attention, and of the *general influence* which seems to take place in the completion of this process.

The fever of digestion is consciously felt in a slight sense of cold shivering, with a quicker and more contracted pulse, and as the process advances, the skin or spasm of the surface relaxes, and the insensible

perspiration augments, like the febrile paroxysm that marks the efforts of nature aroused by the influence of disease. Of this daily progress of symptoms, after meals, persons of weak and irritable habits are particularly sensible.*

Deductions on the Importance of the Primary Organs, particularly the Stomach.

After this detail, the primary organs are to be looked to in the proper exercise of their functions, as the foundation and leading apparatus of the whole, for continuing the welfare of the machine, and especially the stomach.

1. As we have seen, in no case can life exist without this organ;
2. All matters for the support of life must pass through it;
3. It possesses a universal sympathy with every part, for the aid and help of the whole.

We have only to state the case of the celebrated Venetian nobleman Carnaro, to show what the proper regulations of these functions will do, in the attainment of longevity.

Carnaro, till he arrived at the age of forty-five, had led a most dissipated life; finding the powers of his constitution to be rapidly declining, he consulted two of the most eminent physicians in Italy, who attributed his complaints of indigestion, general lassitude, and occasional gout, to his mode of living, and told him he must make his choice, either of *temperance* or *death*. Regarding long life as the greatest blessing mortals can enjoy, and greatly dreading death, he adopted the former; he commenced a vigorous war against his passions, and, after some efforts, gained a complete victory. *Virtue* then triumphed, and crowned him with the blessing of Heaven and the esteem of his friends. He selected his articles of diet, and made a wholesome repast of *one* dish, and abstained from *all* savoury sauces and spirituous liquors; he took only a sufficient quantity to *satisfy nature*, and so great an advocate did he *become for temperance*, that he was satisfied that what he left at a meal did him more good than what he consumed. He took care not to expose himself to sudden vicissitudes of the atmosphere; he abstained from violent exercise and late hours, and selected places for his residence the air of which was salubrious. Thus his constitution and intellects were, by the adoption of this well-regulated plan, fully preserved.

Though Carnaro is a strong instance of the happy effects of a well regulated plan, there are others who, without any of these rigid regulations, deserve more implicit imitation. The Cardinal de Senlis, under a less restricted plan, lived a hundred years—an equal age to Carnaro; and his maxim had been, in the previous years of his life, to live with the caution of an old man when young, so that, when old in years, he was still, in constitution, a youth.

* But the effects of food, as of every thing else, being relative to the state of the stomach, what is light to one is heavy to another; and a cordial in some states occasions vomiting. A heavy meal oppresses the stomach, and depresses its power over the other parts of the system, often inducing alarming symptoms, which are frequently relieved by a puke, or by spirits or aromatics, increasing the power of the stomach.

The celebrated John Wesley is another instance, who, with a natural weak and infirm habit, was able to undergo much bodily and mental exertion, for a long life, and to possess the *mens sana in corpore sano*, solely by adhering to certain rules he had laid down.

In more modern times, Sir John Sinclair recovered his health by a similar plan, though without any of those rigid regulations which mark the plan of Carnaro. Sir John observes—"though naturally possessed of a sound constitution, untainted by any hereditary disease, yet, about the year 1797, he fell into a weak and enervated state; found himself unequal to manage his private concerns, of prosecuting useful inquiries, or of applying his mind to political pursuits, with his former zeal and energy: he saw, also, many of his contemporaries die at an early period, before their constitutions had, apparently, suffered much decay. By reflecting on these circumstances, and a number of others, with which the subject is connected, he came to the conclusion that *more die from their own faults than from actual disease*: and that life might, accordingly, be prolonged, and health enjoyed with satisfaction, by a proper and regulated conduct with each individual, in regard to the various circumstances connected with the continuance or support of life; accordingly, by laying down a proper plan of proceeding for himself, he not only recovered his own health, but was enabled, by his advice to others, to render them an equal benefit. These circumstances led him to publish his excellent work, entitled "*A Code of Longevity*"—the *substance* of which will be found in these pages—where he brings forward, as a leading professional example of his precepts, the immortalized Galen, who, by a certain plan, strictly adhered to, reached the age of *one hundred and forty years*.

These cases then offer abundant proof how a proper and restricted mode of proceeding, in diet and regimen, even in a weak constitution, will ensure a healthy longevity. It is at the same time not to be disputed, that nature alone has often done that for the individual which the above system is so well calculated to effect, without any of the restrictions now insisted on; but even in these cases of what may be termed *natural* longevity, it has never happened but where the primary parts of the machine, the stomach and bowels, have originally been, in their fabric, the strongest parts of the body. These remarkable instances have chiefly occurred in cold climates, and amongst the lower orders of society; and some curious examples of it that occur in Medical History are as follows.

Remarkable Instances of Longevity.

Isabel Walker, a Scotch woman, died at *one hundred and twelve*, without much severity of regimen; but she was distinguished by a *placidity of temper*, and possessed that happy medium state of habit, neither lean nor corpulent, favourable to long life.

Peter Garden, a Scotchman, died aged *one hundred and thirty-one*; his stature was tall, and his employment agriculture, which he continued to his death, with a wonderful appearance of freshness and youth.

John Taylor, a Scotch miner, lived to *one hundred and thirty-two*: his teeth continued sound to the last.

Gylloul Macrain, a native of the island of Toura, in the Hebrides, died, after keeping *one hundred Christmas masses*.

Catharine, Countess of Desmond, in Ireland, who died in the reign of James the First, was *one hundred and forty*; and thrice in the course of her life she renewed her teeth.

Brian Monagher, a native of Ireland, walked twenty miles to vote, at a contested election, in Queen's County, he being then *one hundred and fourteen* years old. The law required that forty-shilling freeholders should renew the registering of their qualification every *seven* years; and so little idea had this farmer of death, that, in giving a plumper to Sir Henry Parnell, he intimated his intention, of registering as a 50*l.* freeholder the *next time*, which answers for life!

Thomas Parr, a native of Shropshire, was buried in the Abbey of Westminster, at the age of *one hundred and fifty-two*.

Lawrence, a native of the Shetland Islands, married at the age of *one hundred*, and died at *one hundred and forty*.

Kentigern, or St. Mungo, Bishop of Glasgow, lived to the age of *one hundred and eighty-five*, as certified on his monument.

Henry Jenkins, of Northallerton, Yorkshire, lived to the age of *one hundred and sixty-nine*, being first a labourer, and afterwards a fisherman.

Sarah Rouen, *one hundred and sixty-four*, and John Rouen, her husband, *one hundred and seventy-two*, were married one hundred and forty-seven years, both natives of the Directory of Carsoueber.

Petratsch Zorten, a native of Hungary, and a cow-herd, lived to *one hundred and eighty-five*.

The greater proportion of these persons were natives of Scotland; though it is known that the most numerous instances of longevity are to be met with in Norway and Russia; out of 6229 persons in Norway, sixty-three had lived to a hundred; and out of 726,273 in Russia, two hundred and sixteen attained one hundred years, two hundred and twenty above it, and four one hundred and thirty. In the list of longevity, enumerated above, all these persons were of a low situation of life, except the Countess of Desmond; and the diet of all of them seems to have been moderate, and in some instances abstemious. Parr's maxims of health were, to keep your head cool by temperance, your feet warm by exercise; to rise early and go soon to bed; and if you are not inclined to get fat, to keep your eyes open and your mouth shut, or, be moderate in your sleep and diet.

The diet of Jenkins is said to have been coarse and sour; and in the north of England, distinguished for long-lived people, it is much the same, consisting of salted meat and sour-leavened bread.

Zorten's diet consisted entirely of milk and cakes, with a glass of brandy; and, being of the Greek church, he was, to the last, a strict observer of all their fasts.

The following instance of longevity is mentioned in the St. Petersburg Gazette. There is living near Polosk, on the frontiers of Lithuania, a man named Demetrius Crabowski, who is *one hundred and sixty-eight* years old. He has always led the humble but tranquil life of a shepherd, assisted by his two sons, the eldest of whom is *one hundred and twenty*, and the youngest *ninety-seven* years old.

The following is an epitaph on Margaret Scott's tomb stone in Scotland.

Stop, passenger, until my life you read,
 The living may get knowledge from the dead!
 Five times five years I lived a virgin's life,
 Ten times five years I was a virtuous wife,
 Ten times five years I lived a widow chaste,
 Now wearied of this mortal life I rest.
 Between my cradle and my grave have been
 Eight mighty kings of Scotland, and a queen.
 Four times five years the commonwealth I saw,
 Ten times the subjects rose against the law.
 Twice did I see old Prelacy pulled down,
 And twice the cloak was humbled by the gown
 An end of Stuart's race I saw—nay more,
 My native country sold for English ore.
 Such desolations in my time have been,
 I have an end of all perfection seen.

Comparative Statement of Longevity.

To these facts, we may add, in comparing the different classes of society with respect to longevity, that the profession of the gardener is the most healthy; next to it husbandmen are also healthy, but from their great exertions and exposure to every weather, they are soon worn out, and generally old men before fifty. Manufacturers are neither healthy nor long-lived. Miners, who are much below ground, are generally healthy, and often long-lived. Soldiers, unless cut off by the casualties of war, are long-lived, as well as sailors, who are generally healthy; and this is proved by the records both of Chelsea and Greenwich Hospitals. Persons engaged in commerce, if not too speculative, and their minds racked with anxiety, are generally long-lived. The *voluptuous*, both in town and country, are commonly cut off in their *prime*. Dancing-masters are long-lived, from their constant exercises; singers, on the contrary, are short-lived. The learned professions, at the farthest, seldom exceed the age of eighty. In addition to these truths it may be observed, in respect to the sexes, that women are generally longer lived than men; and mothers than single women.

On this solid foundation, then—the healthy action of the stomach and bowels—is the present *Code of Longevity* built, which no speculative reasoning can overturn, and which every practical fact tends to confirm and enforce. The means of carrying it into effect are simple and clear, neither wrapt in mystery nor needing disguise to recommend them; and along with the regulation of these primary functions, they require only the auxiliaries of diet and exercise, under such control, as to render the plan successful.

Method of Counteracting Indigestion, or of Preserving a Healthy State.

All the preceding symptoms of indigestion proclaim weakness in the primary part or the stomach, and the consequence of this weakness here is, that the sympathetic organs, or the liver and intestines, unavoidably partake of the same state. Wherever weakness occurs, in any organ or part, its functions become retarded; hence accumulation follows, and

congestions are formed, that clog the wheels of the machine. The first and leading point then is, to remove this disposition to disease; and for this purpose the bowels must first be unloaded of their contents, and the energy of the liver, next excited, to perform actively its peculiar secretion: when this is once effected, being the fundamental indication, then the second, or relief of the organ itself, comes to be the remaining object in view, which consists in restoring to the stomach its energy, or healthy tone; and these two indications must go hand in hand, in order to give and continue effectual relief.

Use of Aperients.

In performing the first indication, much attention is to be paid both to the means and to the frequency; to the means has been given the appellation of Chylo-poetic Aperient, the operation of which is intended to be gentle; not too stimulant or drastic. To its frequency, its use should not be repeated oftener than once or twice a week; acting then, as the gentle assistant, not the violent outrager of nature in her efforts. Perhaps, from no cause, do diseases of the gut or rectum so frequently arise, as from the rash and imprudent use of purgatives. With many, this has become such an established habit, that a motion is never procured without the intervention of art. Thus an exciting cause of disease is constantly applied. Nay, since popular medicine gave such a rage for drastics, under the name of *Antibilious Pills*, now so numerous and so *unscientifically* compounded, from that time diseases of the rectum seem chiefly to have taken their origin, for they are at least four-fold within these thirty years. Nature intended that this part should be kept in a *certain degree distended* by its contents, and where these are thrown off too frequently, and that by a strong action producing irritation, this natural distention not only is not allowed to take place, but from the irritation an unnatural contraction of the fibres of the gut is induced; which, by the frequent repetition of such irritation, gradually thicken and harden, so as to occasion disease by this thickening and contracting of the cavity in whole or in part. Once in twenty-four hours is sufficient for the purposes of health, and thus contraction will be prevented on the one hand, and irritation on the other. The rectum is to be considered as the *natural water-closet* of the system, which does not require to be too often or unnecessarily emptied; and if proper regard is paid to this idea, we shall not hear so often of strictures of the rectum, or the use of *bougies* for their removal. The *best bougie* is the contents of the part.

Use of the Alterative Digester.

The second indication is performed by what is termed the Alterative Digester, or such means as invigorate; for the weakness of the stomach is oftener caused by loss of tone in its muscular fibres, than from any other source. Its *secretion* is not so readily affected as its *moving powers*; and as digestion is connected with more circumstances than the mere application of the *gastric juice*; so in the means employed to act on the organ, these circumstances are all to be taken into account, both in the prescription and its use; for the same caution, as regards acting on its contents, is not so necessary here as in the intestines,

Such are the principles of the Abernethian System, thus shortly explained; and whatever form of medicine is adopted to execute these views, it can only act properly, by answering the two objects pointed out. To this system Mr. Abernethy was led by his observations on the hospital practice. He saw there that local disease, or affection of a part, induced a general derangement of the body and interruption of health; and in the same manner he saw that a general derangement as completely influenced this state of local disease. Reflecting on these things, he was led to believe, that if the primary organs of digestion and expulsion are kept in a healthy condition, the health of the whole machine must be regulated by them, and follow their healthy condition, as links of the same chain. The plan of medicine to do this is clearly simple, and can never fail of success, when assisted at the same time by a proper attention to diet and exercise.

In confirmation of the first, or the powerful effect of diet, the case of Carnaro and other celebrated instances have been stated; and in addition to these, we shall here insert Mr. Abernethy's Rules on the subject, which he strongly and constantly recommends to the perusal of every patient that consults him, as taken from the celebrated seventy-third page of his work.

THE ABERNETHIAN CREED.

"The method of treatment," he observes, "which I have adopted is simple, and founded on the opinions I have formed of the nature of the disease, and on physiological views of the functions of the affected organs. Believing the disordered parts to be in a state of weakness and of irritability, my object has been, to diminish the former and allay the latter. Believing also that the secretions into the stomach and bowels, upon the healthy state of which the due performance of their functions depends, were, in consequence of such disorder, either deficient in quantity or depraved in quality, I have endeavoured to excite, by means of medicine, a more copious and healthy secretion.

In conformity to these views of the subject, the patients have been recommended to be particularly attentive to their diet. The food should be nutritious, and easy of digestion: strong, plain broths, animal food of loose texture, milk, eggs, and farinaceous vegetables, are the articles which appear most advisable. But, as custom and inclination have so great an effect in regulating the action of the stomach, I have contented myself with recommending patients not to eat any thing which it was probable that they could not digest. It seems reasonable to suppose, that if the food be properly digested, it will not irritate the intestinal canal; but that if digestion fails, the animal and vegetable matters will undergo chemical changes in their passage through the long tract of intestines, and thereby maintain a state of irritation in those organs. I have urged patients not to oppress the powers of the stomach by too great a quantity of food, nor to take a second meal until time has been allowed for the digestion of the first, and for the recovery of the powers of the stomach. Whilst I have thus advised patients to eat moderately and not too frequently, I have also cautioned them not to let the stomach become irritable by too long abstinence.

The quantity of food should of course, be proportionate to the powers of the stomach. If it receives more than it can digest, no nourishment is obtained from the superfluous quantity, and the undigested aliment not only acts injuriously in the bowels, but in the blood, and in the urine, as has been mentioned. There is also another view of the subject. Moderation in diet not only insures the complete digestion of the aliment, but it prevents the blood vessels from being over-loaded and kept in a state of action exhausting to their strength. When also important organs may be in a state of nervous irritation and disorder of functions, if there be a plethoric state of the blood-vessels at the same time, those vascular actions are likely to ensue, which may produce an alteration of their structure, and irremediable disease.

The function of digestion will not, however, go on well, even where these circumstances have been attended to, if the stomach be deprived of a stimulus to which it has long been accustomed. Uneasy sensations will be experienced, denoting, if I may so express it, a discontented state of this organ, and a want of the expected stimulus. It is on this account injurious wholly to restrain those patients from the use of wine who have been in the habit of taking it. A moderate quantity of such a stimulus may be allowed after dinner, to prevent uneasy sensations, and to promote digestion; but strong fermented liquors must be injurious at any other period. It is wrong to stimulate the stomach when it has no task to perform.

Even our food must be considered as exerting a medicinal influence in disorders of the stomach, when that organ is irritable. A vegetable diet and abstinence from fermented liquors may tend to tranquillize it. On the contrary, when it is weak as well as irritable, that aliment which is most readily digested is to be preferred, and cordials are sometimes beneficial. The effects of food and medicine can never be considered as resulting from their operation on the stomach solely, but from their conjoint influence upon the *nervous system* in general. Irritability of the stomach may arise from that of the brain, and unstimulating diet may tend to tranquillize the latter organ, and thereby alleviate the disorder of the former. On the contrary, a more generous diet may, by exciting the nervous system, produce that degree of energy in its action, which invigorates the stomach, and tranquillizes its disorder. It may further be observed in some cases, that the kind of medicines or diet which is serviceable to the stomach, may aggravate the nervous disorder; and, on the contrary, that those means which seem to tranquillize nervous irritation tend to diminish the powers of the stomach.

A regular diurnal evacuation of the bowels is particularly necessary, since the detention of the fæces must prove irritating to these organs. Purging medicines sometimes relieve unpleasant sensations; but they do not in general produce even this effect; and all active purges seem to increase the disorder. It is natural to suppose, that strong stimuli will aggravate the unhealthy condition of weak and irritable parts.

It is difficult, in many cases, to regulate the actions of the bowels, either by diet or medicine. They are costive for a time, and then fits of purging come on. The former state must be obviated, in order to prevent the latter. Medicines which excite a healthy action of the

bowels in one person, are either inert or too active in another. Doses which would have no effect in a state of health, become purgative in this disorder—a circumstance which shows that the bowels are irritable. There are some rare instances of the contrary, in which it is exceedingly difficult to excite the actions and secretions of these viscera. The object which I had in view, in all cases, is to excite the peristaltic action of the bowels, without irritating them, so as to induce them to pour forth and evacuate their own fluids. The administration of purgative medicines, in very small doses, at regular intervals is in many cases the best mode of effecting this purpose.

At the same time I have not been inattentive to the error in the biliary secretion, which exists in the greater number of these cases. The relief, which arises from the increase or correction of the biliary secretion, in the majority of these cases, shows how much the liver is concerned in causing or aggravating the symptoms in these diseases.

I have generally explained to the patients the objects which I had in view, in correcting disorders of the digestive organs, by saying that there are three things which I consider as right and necessary to the cure of disorder. First, That the stomach should thoroughly digest all the food that is put into it. The patient, perceiving the necessity of obtaining this end, becomes attentive to his diet, and observes the effect which the quantity and quality of his food and medicines have upon his feelings, and the apparent powers of his stomach. Secondly, That the residue of the food should be daily discharged from the bowels: here too, the patient, apprised of the design, notes what kind and dose of purgative medicine best effect the intention; and whether it answers better if taken at once or at intervals. Thirdly, That the secretion of bile should be right, both with respect to quantity and quality.

Whenever circumstances would permit, I have recommended the patients to take as much exercise as they could, short of producing fatigue; to live much in the open air; and, if possible, *not to suffer their minds to be agitated with anxiety*, or fatigued by exertion. The advantages of exercise in nervous disorders, upon which those of the digestive organs so greatly depend, appear to me very striking. It were to be wished that we had some index to denote the strength and irritability of the nervous system, serving as the pulse does with regard to the sanguiferous organs. Perhaps the strength, agility, and indefatigability of the muscles may be regarded as the surest evidence of energy, of nervous power, and bodily vigour. If this were granted, however, it would follow, that many persons possessing great nervous power, have nevertheless great nervous irritability. Many people who are extremely irritable and hypochondriacal, and are constantly obliged to take medicines to regulate their bowels whilst they lead an inactive life, no longer suffer from nervous irritation, or require aperient medicines, when they use exercise to a degree that would be excessive in ordinary constitutions. The inference which I draw from cases of this description is, that nervous tranquillity is restored in consequence of the superfluous energy being exhausted by its proper channels—the muscles. When, on the contrary, the nervous system is weak and irritable, exercise seems equally beneficial; but caution is here requisite as to the

degree in which it should be taken. A weak and irritable patient may not be able to walk more than half a mile without nearly fainting with fatigue on the first day of the experiment; but by persevering in the effort, he will be able to undergo considerable muscular exertion without weariness. Does not this imply a considerable increase of bodily strength, and is not the acquisition of strength the chief desideratum in the cure of many disorders? The nervous irritability also, when dependent on weakness alone, will proportionately diminish with its cause. In the latter case the nervous energy seems to be augmented in consequence of our increasing the demand for it. I am induced to make these observations from a belief that exercise is not employed as a medical agent to the extent that its efficacy seems to deserve. Attention to diet, air, exercise, and mental tranquillity, are more decidedly beneficial than medicines. Surgeons in London meet with frequent and convincing instances of the efficacy of pure air. Patients under the irritation of a local disease, who scarcely eat or sleep in town, recover their appetite, digestion, and sleep, so suddenly on their removal into the country, as to leave no room for doubting, that the change of air has produced this beneficial alteration in their health."

Such, then, are the dictates of Mr. Abernethy, to which he refers his patients; and, without entering into the strange colloquial drama that on such occasions ensues, we shall state that his peculiarities, though not always pleasant, will, like an unpalatable drug, though received with distaste at first, from the truths they convey, gain their full influence on the mind of every invalid in the end.

Thus, in conclusion, the Abernethian Code of Health and Longevity may be in its principles comprised in a nut-shell; and consists, as has been mentioned, in three grand points—

1. The due Regulation of the Stomach and Bowels, by the use of mild Aperient Medicine.
2. Moderation in Diet to co-operate with this, and rather in quantity than in respect to quality.
3. Exercise proportioned to the Constitution and circumstances of the Individual, taken chiefly in the open air.

This is the true system for Health and Longevity; and death will never take place where a proper attention to this system is observed, but by a *gradual decay*, or by *unforeseen casualties*, which no precaution can guard against. Thus, on the plan laid down, "*every one may be justly said to have his Health in his own keeping.*"

CHAPTER XIII.

PERNICIOUS CUSTOMS, TOBACCO, MINERALS, &c.

I SHALL now notice some of the most pernicious customs which are prevalent, and which materially injure the constitution.

Tobacco.

Among all the pernicious customs, the use of ardent spirits excepted, I know of none more nauseous, unpleasant, and perhaps I may add, injurious to health, than the use of tobacco, in various forms. I cannot conceive how it is that a plant so poisonous, sickening, and disgusting, has been brought into such universal use. It must be, no doubt, like the use of opium, imputed to its narcotic effects. As this is an important subject, I shall occupy a few pages in pointing out its deleterious influence on the system, extracted from a Dissertation on the Use and Abuse of Tobacco, by Adam Clarke, LL. D.

In 1798, *seventy* ships, laden with tobacco, came into the port of London, whose cargo amounted to *forty millions* of pounds weight! When such an amazing consumption of this article, in only two kingdoms, is considered, it will not appear surprising that a plant which was formerly only a wild production of North or South America, should have been so extensively cultivated; seeing not only the inhabitants of Great Britain and France, but of Europe in general, have acquired the extravagant habit of using such prodigious quantities of it, either in the form of *powder*, as a *sternutatory*; by the *pipe*, in the way of *fumigation*; or in *twist* as a *masticatory*. And this habit, strange to tell, notwithstanding its shocking indelicacy and nastiness, continues to enslave, in the most disgraceful manner, the higher, lower, and middle ranks of life. The *Church* and the *State* have enjoined to *sanctify* and *legalize* the use of it, from the time of the *Grand Prior*, on the one part, and *Queen Catherine de Medicis*, on the other, to the present day.

Dr. Maynwaring in his *Treatise* on the *Scurvy*, has written largely against the use of this herb. He asserts in the most positive manner that it is a grand procuring cause of scorbutic complaints, and that the scurvy has abounded much more in these nations since the introduction of tobacco than it had ever done before.

On this subject old Mr. Salmon, a man in practical medicine wise beyond his day, speaks as follows:—"The *powder of the leaf* is used as a *sternutatory* to cleanse the head and brain, and may be profitable, being used physically; but the ordinary and constant use of it for *snush*, is of very evil consequences, and induces *apoplexies*. For drawing away the thin matter by itself, through the continual use thereof, the thick is left behind, where increasing, and being too thick to pass through

the *Oss Ethmoides* or sieve-like bone, the cavity at length is filled therewith, where obstructing the animal spirits near their centre, an apoplexy is infallibly induced: and I am confident more people have died of apoplexies in one year, since the use of this *snush*, than have died of that disease in an hundred before the use thereof; and *most, if not all, who I have observed to die of late of that disease, were such as were extreme and constant snush-takers.*"

The great virtues of a pipe, taken in the morning fasting, are, (says Mr. Jones,) extolled by many; "because," say they, "it pumps up a quantity of cold phlegm from the stomach." Not to insist, that nothing can be taken out of the stomach but by vomiting; let it be observed, that the substance which is forcibly hawked up by many who have acquired this most disgusting habit, is the *mucus* secreted by the tonsils to lubricate and defend the *Œsophagus*; together with the saliva which is secreted. And this *mucus* and saliva are not less requisite in their respective places, than the blood itself; as they are not only absolutely necessary for the defence of the parts already mentioned, but also for the important purpose of *digestion*: which, if not properly promoted, and carried on, the body cannot long continue in a healthy state. Every medical man knows well, that the *saliva*, (which is so copiously drained off by the infamous *quid*, and the scandalous *pipe*,) is the first and greatest agent which nature employs in digesting the food.—See *Tisset on Palsey*, &c. p. 123.

But is the elegant snuff-box as dangerous as the *pipe* and the *quid*? Let us hear evidence. "The least evil," says Mr. De Bomare, "which you can expect it to produce, is to dry up the brain, emaciate the body, enfeeble the memory, and destroy, if not entirely, yet in a large measure, the delicate sense of smelling."

"Common snuff," says a sensible medical practitioner, (whose opinion on the subject lies now before me,) "in habitual snuff-takers, has been found to penetrate into the *sinuses* communicating with the nose, and into the *antrum* where it has formed horrid abscesses: it is often carried down into the stomach, and by the use of it, the skin is tinged of a pale brown colour."—This is sufficiently evident in all snuff-takers. The most delicate females have their complexion entirely ruined by it. Strange! that the *snuff-box* should be deemed too great a sacrifice for *that*, for which most people are ready to sacrifice every thing beside!—Many cases have been observed where the appetite has been almost destroyed, and a consumption brought on, by the immoderate use of this powder.

I heartily wish the Corporation of Surgeons, and other anatomists, would procure as many bodies of habitual smokers and snuff-takers as possible, that being dissected, we might know how far that ever-to-be-dreaded evil prevails, which J. Borrhi in a letter to Bartholine, says, happened to the brain of an immoderate smoker, which on dissection was found dried and shrivelled up by his excessive use of the pipe! See Chambers' Cyclopædia, Dr. Rees's Edition, article *Tobacco*.

In one of the German literary Journals several cases are mentioned of *vertigo*, *blindness*, and *paralysis*, occasioned by the immoderate use of this herb.

The use of it as an emetic, for which some have pleaded, 'is extremely dangerous, as it has often occasioned almost intolerable cardiac-anxieties, violent vomitings, and stupidity.

Mr. Bomare informs us, that it has been employed as a remedy in lethargic swoonings: and the patient has been restored to *sensibility*, only to be racked by a more dreadful disorder. Convulsions, accompanied with vomitings, cold sweats, and a feeble and intermitting pulse, with other dreadful symptoms, have been the consequence of its uses in the above cases. If it be so dangerous, when employed as a remedy, what evil may not be expected from it when used constantly, immoderately, and without any corrective?

Under the article *Torpor Pancreatis*, Dr. Darwin observes, "I saw what I conjectured to be a tumour of the Pancreas, with indigestion, and which terminated in the death of the patient. He had been for many years a great consumer of *tobacco*, insomuch that he chewed that *noxious drug* all the morning, and smoked it all the afternoon. As the secretion from the Pancreas resembles saliva in its general appearance, and probably in its office of assisting digestion, by preventing the fermentation of the aliment, there is a reason to suspect that a sympathy may exist between the salivary and pancreatic glands; and that the perpetual stimulus of the former by tobacco, might in process of time injure the latter." *Zoonomia*, vol. 2. p. 80, 4to ed.

"The unwise custom of chewing and smoking tobacco for many hours in the day, not only injures the salivary glands, producing dryness in the mouth when this drug is not used, but I suspect that it also produces schirrhus of the Pancreas. The use of tobacco in this immoderate degree injures the power of digestion, by occasioning the patient to spit out that saliva which he ought to swallow; and hence produces that flatulency which the vulgar unfortunately take it to prevent."

That it is unfriendly to animal life may be variously proved. A poultice of it laid to the pit of the stomach, proves dreadfully emetic in a short time. The following case I think awful, and insert it here as a warning to those whom it may concern. A physician of my acquaintance was sent for to see a girl of about seven years of age, grievously tormented with spasms in her stomach, and incessant vomitings. Various means were used to relieve her, but without success; nor could the *cause* of the complaint be found out for a considerable time; (the child, till her sudden seizure with the vomitings, had been in perfect health.) At last the *smell* arising from the breath and head of the child led to a detection of the cause. The girl had what is termed by some a *sore or broken-out head*, (*scabies*;) to cure and cleanse it, her mother had that day made an ointment of *butter* and *snuff*, and applied it to the place. This was found to be the sole cause of those violent retchings, which had nearly put a period to the child's life!

A person of my acquaintance, who had been an immoderate snuff-taker for upwards of forty years, was frequently afflicted with a sudden suppression of breathing, occasioned from a paralytic state of the muscles which serve for respiration; these affections grew more and more alarming, and seriously threatened her life. The only relief she got in such cases was from a cup of cold water poured down her throat. This

became so necessary to her, that she could never venture to attend even a place of public worship without having a small vessel of water with her, and a friend at hand to administer it! At last she left off *snuff*; the muscles re-acquired their proper tone, and in a short time after she was entirely cured of a disorder occasioned solely by her attachment to the snuff-box, and to which she had nearly fallen a martyr!

The *poisonous* nature of the oil of this plant has been observed by several, and particularly by Fontana, in the following experiments, who ranks this herb with the vegetable poisons. 1.—“I made,” says he, “a small incision in a pigeon’s leg, and applied to it the oil of tobacco. In two minutes it lost the use of its foot. 2.—I repeated this experiment on another pigeon, and the event was exactly the same. 3.—I made a small wound in the pectoral muscles of a pigeon, and applied the oil to it; in three minutes the animal could no longer support itself on its left foot. 4.—This experiment repeated on another pigeon ended the same way. 5.—I introduced into the pectoral muscles of a pigeon a small bit of wood covered with this oil; the pigeon in a few seconds fell insensible. 6.—Two other pigeons to whose muscles I applied this oil, vomited several times all that they had eaten. 7.—Two others with empty stomachs, treated as above, made all possible efforts to vomit.” Fontana observes, that vomiting was the most constant effect of this oil.—Various other experiments prove, that an application of this herb, in almost any form will produce this effect. Chemists observe, that tobacco leaves, distilled in a retort without addition, yield an acrid empyreumatic poisonous oil. Kœmpfer also ranks it with the strong vegetable poisons.

Nor need we wonder at the above, when it is known that a single drop of the chemical oil of tobacco, being put on the tongue of a cat, produced violent convulsions, and killed her in the space of one minute. A thread dipped in the same oil, and drawn through a wound made by a needle in an animal, killed it in the space of seven minutes. Indeed the strong *caustic oil* and *acrid salt* which are contained in it, must produce evil effects beyond calculation.

These facts which are well authenticated, may suffice; and taken into connexion with that word which says, “*Thou shalt do NO murder,*” should deter every person who wishes well to his body and his soul, from the (at least immoderate) use of this herb.

That it is sinful to use it as most do, I have no doubt; if destroying the constitution, and vilely squandering away the *time* and *money* which God has given for other purposes, may be termed *sinful*.

Many persons I have known, who were scarcely able to procure the necessaries of life, and yet by sacrificing health and decency, have made a shift to procure the daily *quantum sufficit* of tobacco. I have observed some whole families, and very poor ones too, who have used tobacco in all possible ways, and some of them for more than half a century. Now supposing the whole family, consisting of four, five, or six, to have used but 1s. 6d. worth in a week,* then, in the mere arti-

* To say nothing of the power of money to increase its value almost beyond credibility by COMPOUND INTEREST, in which case the above weekly consumption would amount in fifty years to upwards of £800 sterling, and in 54 years to upwards of £1000.

ele of tobacco, nearly 200*l.* sterling is totally and irrevocably lost, in the course of fifty years! Were all the expenses attending this business enumerated, probably five times the sum in several cases would not be too large an estimate; especially if strong drink, its *general concomitant*, neglect of business, and appropriate utensils, be taken into the account.* Can any who profess to call themselves Christians vindicate their conduct in this respect?

A pious clergyman lately told me, that he had a number of very poor families in his parish immoderately attached to the use of tobacco. He plainly saw that a large proportion of their daily earnings was destroyed in this way. He warned them in private, and preached in public against it, but few of them had resolution enough to lay it aside.

The expense of one very poor family in snuff and tobacco he calculated, and found it to amount to nearly *one third part* of their yearly earnings.

But the *loss of time* in this shameful work is a serious evil: I have known some who, (strange to tell!) have smoked three or four hours in the day, by their own confession; and others who have spent six hours in the same employment! How can such persons answer for this at the bar of God? "But it is prescribed to me by a physician." No man who values his character as a physician will ever prescribe it in this way. Whatever good effects may be attributed even to a moderate use of it, can be produced by medicines of a more cleanly and less dangerous nature. As to snuff, all its good effects, says Mr. De Bomare, may be much better procured by powder of betony, sage, or marjoram. If it be taken as a sternutative, or medicine to cause sneezing, it should be taken *very seldom*, or it will lose its effect; and if it should not, who, for the sake of redeeming his head from some occasional trifling inconvenience, would consent to have his body thrown into continual convulsions!

"But it has done me good." Perhaps it has; so has an emetic: but will you infer thence, that the *constant* use of it is necessary? If you do, be consistent with yourself, and the very next time you need an emetic, be sure to *repeat* it every hour as long as you live.

I grant that a person who is brought under the dominion of the pipe or the snuff-box, may feel great uneasiness in attempting to leave it off, and get some medical man, through a *false pity*, or for *money*, to prescribe the continued use of it; but this does not vindicate it: and the person who prescribes thus is not to be trusted; he is either without principle or without skill.

An eminent Physician, with whose acquaintance and friendship I am honoured, gave me lately the following account.—"When I was in L——, in the year 1789, a certain religious people, at one of their annual meetings, made a rule, or rather revived one, which had been long before made and established among them by their *venerable Founder*,

* My estimate here may be deemed by some rather exorbitant, but how little is it in comparison of that of our noble King James! "Now, how you are by this custom disabled in your goods, let the gentry of this land bear witness, some of them bestowing three, some four hundred pounds a year, upon this precious stink."—COUNTERBLAST, p. 10. 1672.

but had been in a great measure lost sight of, viz. *That no minister in their Connexion should use Snuff or Tobacco unless prescribed by a Physician.* This rule showed at once both their prudence and good sense. Towards the conclusion of the meeting, having offered my assistance to as many as stood in need of medical help, several of them consulted me on the subject of *taking tobacco* in one form or other; and with very little variation their mode was as follows:—"Doctor, I am troubled very frequently with such a complaint, (naming it.) I take tobacco, and have found great benefit from the use of it.—I am sure were I to give it up, I should be very ill indeed; and I am certain, that you are too wise and too skilful a man to desire me to discontinue a practice which has been so beneficial to me." After such an address, what could I say? It was spoken with serious concern, and was properly *argumentum ad hominem*: I knew well they were sincere, but I knew also they were deceived; however, to the major part of them I ventured to speak thus:—"Gentlemen, you certainly do me honour in the confidence you repose in my skill; but you have brought me into a *dilemma*, from which I cannot easily extricate myself; as I find I must either say as you say on the subject, or else renounce all pretensions to wisdom and medical skill. However, I cannot in conscience and honour prescribe to you the continued use of a thing which I know does many of you immense hurt."

But the religious people mentioned above, are not the only persons who have published edicts against this destructive practice. Amurath the IV. Emperor of the *Turks*, the *Tzar of Muscovy*, and *Sha Abas* king of Persia, apprehensive of the evils which were likely to be occasioned in the constitutions and properties of their subjects, forbade the use of tobacco in their dominions, on pain of death:—only the penalty in case of snuff-taking was, *to have the nose cut off*. It is well known that James I. king of England, wrote a treatise expressly against smoking, &c. called "*A Counterblast to Tobacco.*"

Simon Paulli, physician to the king of Denmark, has also written a Treatise on the danger of using this herb; and observes, (which I quote for the sake of those who retain any sentiment of delicacy on this subject,) "*That the merchants frequently lay it in bog-houses, to the end, that, becoming impregnated with the volatile salt of the excrements, it may be rendered brisker, stronger, and more fœtid.*"*

In 1689, the Corporation of Apothecaries of the city of Clermont, probably supposing that great good might be done to themselves or others, by uniting this plant to the *Materia Medica*, applied to the Court of Exercise for permission to cultivate tobacco in their gardens for medical purposes under the name *Nicotia*. But the Court, whether actuated by motives of humanity or commerce, fortunately passed an *Arret*,

* A dealer in this article once acknowledged to me, that he sprinkled his rolls and leaf frequently with stale urine to keep them moist, and to preserve the flavour! A friend of mine whose curiosity led him to see tobacco-spinning, observed that the boys who opened out the dry plants, had a vessel of urine by them, with which they moistened the leaves, to prepare them for the spinner! Do the tobacco-chewers know this, and yet continue in this most abominable and disgraceful practice? Can any person think of the above *impure*, with a quid in his mouth?

bearing date, June 28, 1689, "Forbidding the apothecaries of Clermont, or of any other place to sow any tobacco in their grounds under the name *Nicotia* or any other, on pain of confiscation, and a fine of 1000 livres." What a singular mercy was this! Had the use of it become common in medicine, how many thousands must have been its victims ere this time!

The *impiety* manifested by several in the use of this herb, merits the most cutting reproof. When many of the tobacco consumers get into trouble, or under any cross or affliction, instead of looking to God for support, the *pipe*, the *snuff-box*, or the *twist* is applied to, with quadruple earnestness; so that four times, (I might say in some cases ten times,) the usual quantity is consumed on such occasions. What a *comfort* is this weed in time of sorrow!—What a *support* in time of trouble! In a word, what a *God*.

Again, the interruption occasioned in places of public worship by the use of the snuff-box, is a matter of serious concern to all those who are not guilty. When the most solemn and important matters relative to God and man, eternal glory and eternal ruin, form the subject of a preacher's discourse, whose very soul is in his work; it is no unusual thing to see the snuff-box taken out, and officiously handed about to half a dozen of persons on the same seat.—Would there not be as much propriety in bringing forth and distributing some of the common necessities of life?—"But we do not go to the house of God to take our victuals."—Neither should you to take physic.

Never did Pope Urban the VIII. act more like an Apostolic man, than when he made a Bull to excommunicate all those who took tobacco in the churches.

To the great scandal of religious people, the abominable customs of *snuff-taking* and *chewing* have made their way into many congregations, and are likely to be productive of immense evil. Churches and chapels are most scandalously abused by the tobacco-chewers who frequent them: and kneeling before the Supreme Being, which is so becoming and necessary when sinners approach their Maker in prayer, is rendered impracticable, because of the large quantity of tobacco saliva, which is ejected in all directions.

The Indians of South America make extensive offerings of this herb to their gods, and think it the most acceptable present they can make them, in order to ensure their protection. Was it from *them* that *these* Christians have learned to introduce it into places of public worship?—Surely *they* do not use the *snuff-box* and the *quid* as a part of a religious ceremony.—Some indeed have been so candid as to acknowledge that, "though they did not use it as such, yet they took it as a help to their devotion:"* O earth! earth! earth!—"I cannot," says one,

* I know one case only, in which the use of snuff seems to be innocent. A very pious woman of my acquaintance is obliged, (as she thinks so) to have recourse to it sometimes, for a kind of lethargic affection of her head, by which she is often afflicted: but let it be observed, she takes it merely as a medicine, and uses only one half-penny worth in a month. All such persons I cordially exempt from every censure.

N. B. Since, the above person has totally left off the use of this powder, and has not suffered the slightest inconvenience in consequence of the sacrifice she had made.

“hear to any advantage without it; it quickens my attention, and then I profit most by the sermon.” I am inclined to think there is some truth in this: and such persons exactly resemble those who have habituated themselves to frequent doses of opium; who, from the well known effect of too free a use of this drug, are in a continual *torpor*, except for a short time after each dose. Thus they are obliged to have constant recourse to a stimulant, which in proportion to its use increases the disease.

I cannot help adding, that I have heard just the same sort of reason given for taking a *dram* before divine service; “I am in a better spirit for hearing, have a more tender heart, and a better recollection of what I have heard, when I take a little brandy or gin before hand.”

Such persons as these are utterly unfit to appear in the house of God; and sufficiently prove that they are wholly destitute of the spirit of piety, and of a sense of their spiritual wants, when they stand in need of *such* excitements to help their devotion. He can have no pity for the *wretched*, who does not lift up his soul in prayer to God in behalf of such miserable people.

But are not many led into this practice of smoking by their *pastors*? I am sorry to have it to say, that this idle disgraceful custom prevails much at present among ministers of most denominations. Can such persons preach against needless self-indulgence, destruction of time, or waste of money? These men greatly injure their own usefulness; they *smoke away* their ministerial importance in the families where they occasionally visit: the very children and maid-servants pass their jokes on the *pipng parson*; and should they unluckily succeed in bringing over the uninfected to *their* vile custom, the evil is doubled. I have known serious misunderstandings produced in certain families where the example of the *Idle Parson* has influenced a husband or wife, against the consent of the other, to adopt the use of the pipe or snuff-box.

Should all other arguments fail to produce a reformation in the conduct of tobacco-consumers, there is one which is addressed to *good-breeding* and *benevolence*, which for the sake of *politeness* and *humanity* should prevail. Consider how disagreeable *your custom* is to those who do not follow it. An atmosphere of tobacco effluvia surrounds you whithersoever you go. Every article about you smells of it; your apartments, your clothes, and even your very breath. Nor is there a smell in nature more disagreeable than that of stale tobacco, arising in warm exhalations from the human body, rendered still more offensive by passing through the pores, and becoming strongly impregnated with that noxious matter which was before insensibly perspired.

Consider what pain your friends may be put to in standing near you, in order to consult you on some important business, or to be improved by your conversation. Will you oblige them to pay so heavy a tax for the benefit of your advice, when it would have been more honourable to yourself, and comfortable to them, to have had the gratification in a less expensive way. I cannot help saying, that I have often suffered a very painful nausea from the cause above assigned, and—on which I will dilate no farther.

To those who are not yet incorporated with the fashionable company of

tobacco consumers, I would say, "*Never enter.*" To those who are entered, I would say, "*Desist.*" *First*; For the sake of your *health*, which must be materially injured, if not destroyed by it. *Secondly*; For the sake of your *property*, which, if you are a poor man, must be considerably impaired by it. But supposing you can afford this extra expense; consider, how acceptable the *pence*, (to go no farther) which you spend in this idle unnecessary employment, would be to many, who are often destitute of bread; and to whom *one penny* would sometimes be as an angel of God. *Thirdly*; For the sake of your *time*, a large portion of which is irreparably lost, particularly in smoking. Have you any time to dispose of—to murder? Is there no need of prayer—reading—study? *Fourthly*; For the sake of your *friends*, who cannot fail to be pained in your company, for the reasons before assigned. *Fifthly*; For the sake of your *voice*, which a continuance in snuff-taking will infallibly ruin, as the nasal passages are almost entirely obliterated by it. *Sixthly*; For the sake of your *memory*, that it may be vigorous and retentive; and for the sake of your *judgment*, that it may be clear and correct to the end. *Lastly*; For the sake of your *soul*—Do you not think that God will visit you for your loss of time, waste of money, and needless self-indulgence? Have you not seen that the use of tobacco leads to *drunkenness*? Do you not know that habitual smokers have the drinking vessel often at hand, and frequently apply to it? Nor is it any wonder, for the great quantity of necessary moisture which is drawn off from the mouth, &c. by these means, must be supplied some other way. You tremble at the thought: well you may, for you are in great danger; may God look upon, and save you before it be too late.

It is with pain of heart that I am obliged to say, I have known several who through their immoderate attachment to the pipe, have become mere *sots*. There are others who are walking unconcernedly in the same dangerous road—I tremble for them. Should this fall into their hands, may they receive it as a warning from God!

"But I take (says one) only a little now and then in complaisance to others." Then you will soon be as great a slave to it as others are. When it is offered to you in this way, think of the conduct of Omiah, a native of Otaheite, who was brought to London by captain Furneaux: when a certain lord presented him his golden snuff-box, and invited him to take some; the innocent savage, having gained little acquaintance with European refinement, bluntly replied: "I thank you, my lord, my nose is not hungry."

You say, "I am so long accustomed to it, I cannot leave it off." Alas! alas! your case is truly deplorable, you are shorn of your strength, and power is now lacking to bring the expostulations of conscience to good effect. However, try: see what God will do for you. I knew a woman in the east of this kingdom, who had taken snuff, and immoderately too, for the space of fifty years. With a person who frequently visited at her house, and who was as fully attached to the snuff-box as herself, she agreed to leave it off; and that the first who took any should forfeit a dozen of wine to the other. In a short time she got uneasy, by and by miserable, and lastly ran quite distracted. She was then obli-

ged to resume it. Not long after, hearing the preaching of the people called Methodists, she was deeply convinced of sin, and converted to God. To give it up, she was terribly afraid, remembering what she had suffered before on that account. However, she thought, *Then, I did it in my own strength: Now, I will do it in the strength of God.* She did so; threw away her snuff-box, and abstained from it ever after, and never suffered the slightest inconvenience in consequence.

A very intelligent physician last just now favoured me with the following, which is nearly a similar case,—“A gentleman who was in the habit of taking snuff very freely, was frequently affected with stomach complaints and difficulty of breathing, attended with great prostration of strength, depression of spirits, and other nervous symptoms. He was besides often afflicted with a teasing tickling cough, and inability to utter his words, which to him was a circumstance peculiarly distressing, as he was a public speaker. Several tonic and stomachic medicines were tried, but to very little purpose: at length he was advised to abandon his Snuff-box;—he did so, and the happiest effects were speedily produced. The free use of his speech, appetite, and easy respiration, were restored; and all his other symptoms soon disappeared.”

A near relation of my own had been a slave to it for nearly forty years. I strongly advised her to leave it off; but she had received the common absurd opinion that she should lose her health, if not her life, in the attempt. I endeavoured to shew her that her fears were groundless, and urged the former advice:—she thought me undutiful, if not cruel. I then desisted. In a short time she began to reflect more seriously on the business, and resolved in the strength of God to give it up:—she did so; and her health, which had been in a very shattered state, began soon to improve; in a short time she was restored to a state of entire convalescence, and now enjoys a state of mental and corporeal vigour unusual to persons of such an advanced age. She is now about seventy, and for the six last years in which she has abandoned this destructive practice, has steadily witnessed to the pipe and snuff-box slaves, the mercy of God which has rescued her “from the body of this death.” Many similar cases of reformation among tobacco-consumers I could adduce, did the nature of the Pamphlet require it.

To conclude. I am sorry that in writing on this *vile* subject, I have been obliged to use some words, the places of which I should have been glad to have supplied with others of more agreeable sound, and more easy to be understood; but as these were the only *appropriate* terms I could find, my readers will accept this as a sufficient apology for my using them; and those who *understand* the subject, will at once perceive, that I could not have easily found terms less offensive and less difficult.

Some of the most disagreeable things relative to the practice, against which I have been writing, are still *behind the curtain*; and designedly detained there;—and it is *there alone* where I wish every persevering smoker to seek for a certain vessel named the *sp-tt-ng dish*, which, to the abuse of all good-breeding, is frequently introduced into public company. May *they* and their *implements*, while engaged in this abominable work, be ever kept *out of sight*.

King James finishes his piece on the same subject, as follows: "A custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and in the black stinking fume thereof, nearest resembling the horrible Stygian smoke of the pit that is bottomless."

Bleeding.

An opinion prevails that it is necessary to bleed occasionally to prevent disease, or preserve health. This is a pernicious custom also, and ought to be deprecated by all who place any value upon their lives. No person has a drop of blood to lose. This practice, which brings on many diseases, may afford present relief, but the consequences are very injurious. It occasions debility, dropsy, nervous diseases, &c.

Salts.

Many suppose that it is necessary frequently to take salts to preserve their health. This custom is also pernicious. A viscid, thin, or cold state of the blood, follows the frequent use of the neutral salts. Nor are frequent purges of any kind conducive to health. The motto on a certain tomb stone should be remembered by every person, particularly invalids. "I was well; I took physic and died."

Minerals.

Those who wish to preserve their health, must avoid the use of all minerals internally. They never were designed by the Author of Nature for medicine. They injure the coats of the stomach and intestines, and instead of removing, create diseases. Mercury, which is so universally in use, is the worst of all. Vegetables should be used in preference, being safer, and more congenial to the system.

CHAPTER XIV.

BATHS.

BATHS of various descriptions are now so generally resorted to, for pleasure or the cure of disease, that it becomes very important to consider their effect upon the human system in a medical point of view. They are attended either with considerable advantage or injury to all who use them. Many have been cured, others have been injured by baths, and all which must be attributed to their indiscriminate use, the disease, or the circumstances under which they have been used. We shall now mention the different kinds, and different complaints in which they prove beneficial, or injurious. They may be distinguished into the

<i>Cold,</i>	}	<i>Baths.</i>
<i>Warm,</i>		
<i>Hot,</i>		
<i>Vapour,</i>		
<i>Sulphur,</i>		
<i>Shower,</i>		

The Cold Bath.

The cold bath consists of water, either fresh or salt, in its natural degree of heat, or it may be made colder by art. The temperature of it, in general, varies from thirty-two to sixty-five degrees of Fahrenheit's thermometer. Sea-water, or the water of ponds and of rivers, are very similar in their effects; but sea-water is preferable, from the stimulating effects of the salt with which it is impregnated.

In treating of the cold bath, we wish it expressly understood, that the temperature of the water suitable for bathing in general, must be similar to that of our bays and rivers in the summer months. A sensation of comfort, and some degree of warmth must be experienced a few moments after immersion. A sensation of chillness, on the contrary is an evidence that the temperature of the water is too cold.

Cold bathing may be used in the following complaints: Fevers, chronic rheumatism, hysterics, hypocondriac and paralytic affections, rickets, scrofulous complaints, general debility, obstructed perspiration, languor and weakness of circulation, accompanied with profuse sweating and fatigue on very moderate exercise. It is useful in that slow, irregular fever to which many persons, particularly those who lead a sedentary life, are subject. Such persons have constantly a pulse rather quicker than natural, hot hands, restless nights, impaired appetite, dejection of spirits, &c. It is very useful to such.

The cold bath is injurious to all classes where reaction does not follow its use. If no perspiration or warmth follows, but chills, great depression, languor, head-ache, &c. it is an evidence that it ought not to be

used. It sometimes produces the apoplexy in plethoric habits. It should not be used in obstructed menses, in coughs, ruptures, or when any internal organ is diseased. If the temperature of the body is below the natural standard, or where there is a profuse perspiration, cold bathing should be avoided as injurious. Persons constitutionally weak, and who have but little energy of circulation, are rather injured than benefitted by the cold bath.

We believe that there are few, if any cases, in which the sudden application of cold water to the system, (except in some particular diseases) proves beneficial. On the contrary, the sudden shock given to the system, often brings on disease. Therefore, *a very cold bath* should be seldom used. The water for ordinary bathing for persons in health, as well as in disease, should be of such a temperature, as causes an agreeable sensation while bathing. When this agreeable sensation is not felt, but rather there is a sense of coldness, the person should leave the water immediately, wipe himself dry, then walk or exercise briskly until warmth of the system is restored.

For the want of proper precautions in bathing, many have lost their lives.

Bishop Heber of Calcutta, on a mission from England to that country, died in the bath in consequence of not attending to the above precautions. It is said that Marcellus was so prostrated by the cold-bath, that he died soon after.

Topical Bathing.

The application of cold water, in cases of local inflammation, proves highly efficacious. It may be freely and safely used in inflammation of the brain, dropsy of the head, and in some grades of fever, particularly typhus.

A variety of chronic catarrh, which displays itself in a troublesome flow of mucus from the nostrils and often continues for months, is cured by immersion of the head in cold water, or by the application of this fluid to the part, by means of a spout or tube. The following case from an old writer little known, (*Vander Heyden*) will show the utility of this practice.

“Bathing of the head in cold water cures also inveterate pains of that part, and the continual catarrhs and defluxions from thence. For it is certain, that if the head be put in cold water, as far as the middle bone of the hinder part of the head, and to the end of the nose before, so that there be left just so much of the nose out of the water, as that the party may have freedom of breathing only, and that this be done so long, as while a man may be saying the Lord’s Prayer, the pain of the head, though it hath been of long continuance, will hereby be removed, and the defluxions stopped, as hath often been proved by experience. And I have been much confirmed in this opinion of mine by an experiment of it made upon a certain English Knight, named Sir Toby Mathews, a man no less eminent for wisdom, than fit for public trust. This gentleman having been troubled twenty years together with an intolerable pain on one side of his head, and also with a continual and violent defluxion of the head, distilling through his palate and nose in so great

a quantity, that he could never go without a wet handkerchief in his pocket; he was so happily cured of both these maladies in the sixtieth year of his age, by thus bathing his head in cold water, as that till the seventieth year of the same which he hath now passed, he hath never had the least touch of either during the said space of time; and being now better in health than ever he was in his life before, to prevent his falling into the like infirmities again, he useth the said immersion of his head in *cold water* all the year long, and even in the depth of winter; also, he saith that he received this profitable advice from a certain English nobleman, who having himself been a long time much tormented, with the same disease, had by this means cured both himself, and very many others who were alike affected, and restored them to perfect health to the great admiration of all men."

It is stated that several wens have been cured by bathing them frequently in salt water.

Dr. Garret Lawrence, a member of the society of Shakers, New Lebanon, New-York, a very intelligent physician and an excellent botanist, informs me, that the sight of eyes which have been weak and dim by age, or any cause, are essentially benefitted or cured, by holding the face under clear water every day, and suffering it to come in contact with them by winking a few times. It is reasonable to suppose that this practice is calculated to give them tone and energy.

Dipping or bathing the crown of the head every morning, in a basin of cold water, is an excellent remedy for painfulness of the head, melancholy and nervous disorders.

Warm or Tepid Bath.

The temperature of the warm bath, should be about ninety-five of Fahrenheit's thermometer. This kind of bath is much better calculated for bathing in general, in most seasons of the year, than either the cold or the hot bath.

"We are not allowed" says Dr. John Bell of Philadelphia, "to doubt of the tranquillizing and soothing, in fine, of the sedative operation of warm bathing. There seems to be, however, this difference between the cold and the warm bath, that while the former depresses at once, and powerfully, the circulating and nervous systems, benumbing and rendering them torpid even unto death, or preparing for a violent and irregular reaction—tingling and glow, the latter is just in that relation with the nervous system to convey a sensation, soothing by its mildness and active by its diffusiveness, and with the capillary system to invite blood into the smaller vessels of the extremities, which were of a temperature less than the water, and thus produce an equal yet moderate fullness and action of these vessels; an effect still further insured by the softened and diminished resistance of the external tegument, or cuticle."

"To those who are past the meridian of life," says Darwin, "and have dry skins, and begin to be emaciated, the warm bath, for half an hour twice a week, I believe to be eminently serviceable in retarding the advances of age." Acting on this principle, this learned physician relates that when Dr. Franklin was in England, he recommended the latter to use a warm bath twice a week, a practice which he afterwards continued till near his death.

“So early as the time of Homer, an opinion seems to have prevailed of the utility of warm bathing in advanced life. When Ulysses, after his return to Ithaca, found his father Laertes reduced to great weakness, he advised him to use warm bathing, and to encourage him, told him he had seen one *whose case was exactly similar to his, worn down and emaciated with age*, who, by the use of warm baths, very quickly recovered his appetite and rest. He likewise adds, that its efficacy in such cases was well known, and that it was a common *custom among old men*.” *Odyss. XXIV.*

“It has been supposed till very lately that one constant effect of the warm bath is to relax and debilitate the body; but numerous experiments seem to prove that this opinion was founded in error, and that, on the contrary, persons debilitated by disease, have felt stronger on the days when they used the warm bath, and were soon restored to their former strength. If in any cases relaxation and debility follow the use of the warm bath, it is to be attributed to the heat of the bath having been too great for the constitution of the patient, or the immersion having been continued too long. The stimulant effects of the warm bath are very inconsiderable, and it is found useful in allaying irritation, diminishing morbid frequency of the pulse, relaxing and purifying the skin, and in inducing sleep and repose. The warm bath will be attended with advantage in those cases of fever where the heat is preternaturally great, but where, from some affection of the lungs, or other unfavourable symptom, cold bathing is inadmissible; in the paroxysms of hectic fever; in several eruptive diseases attended with increased heat and dryness of the skin; in atonic gout and rheumatism, accompanied with stiffness and swelling of the joints; in chlorosis; in slight cases of palsy; in scrofulous swellings; in some spasmodic and convulsive affections, where the cold bath might prove too violent; in all those affections of the bowels that seem to depend on an irregular or diminished action of any part of the alimentary canal; and in cases of debility attended with nervous irritation. In cases of predisposition to phthisis, it shares the frequency of the pulse, and tends to retard, at least, if it does not wholly prevent, the pulmonary affection. The time of continuing in the warm bath should be varied according to the temperature of the water and the feelings of the patient. In a bath of ninety-six, a person may remain fifteen, twenty, and thirty minutes.”

Hot Bath.

By the hot bath we understand a greater degree of heat than the warm bath. The water should be made as hot as the person can bear. In this state, it possesses the most powerful relaxing properties, and should only be used in cases of emergency, in very painful and dangerous diseases, where an immediate relaxation becomes necessary, such as fits, suppression of urine, gravel, strictures, complaints of the kidneys, cramp, hypocondria, bilious cholic, &c. The most sudden and salutary effects are experienced from the hot bath, in these and similar complaints.

Topical Applications.

Hot or warm water applied to any painful parts, is attended with the

happiest effects. It removes the tension of the skin, diminishes irritability, and is often very useful.

Neither the hot nor the warm bath should be used, where there is a great determination of blood to the head, or where there is much plethora.

Fourcroy relates the case of an individual, who, being immersed in a bath of the immoderate heat of 66 degrees of Reaumur (180 degrees of Fahrenheit), fell down apoplectic an hour after. And a writer acquaints us with the history of a patient who was seized with paralysis from having used a bath excessively hot. Peter Frank mentions the development of an inflammatory fever followed by the appearance of fourteen abscesses, after the application of such a bath. Venel saw at Balaruc, a sick person sink into a state of fatal debility by remaining too long in a hot bath; and the same author tell us, that, at Cauterets, a Spaniard died of hemorrhage from the same cause. Similar inconveniences and alarming effects are also noticed by Currie.

"By a *hot bath*," says Bell, "we are to understand that in which the water is of a heat exceeding 98 degrees of Fahrenheit. It is decidedly stimulating, and, in its often violent and marked effects on the human body, contrasts strongly with the more pleasurable impressions produced by the warm bath. This contrast must convince us of the impropriety of including the two under a common head, and of confounding their different powers. The hot bath, by imparting to the system an excessive dose of heat, strongly excites the circulation, and proves a nervous irritant."

The Vapour Bath.

The vapour or steam bath, is a contrivance by which steam, either simple, or medicated, is brought by pipes from a vessel of boiling water, and admitted to the body, placed in a small box or chamber. The room is heated to a temperature considerably above that of the atmosphere, and the naked body (sometimes including the head,) is suffered to remain in this heated air until perspiration takes place. Aromatic herbs are thrown into the boiler, which renders the bath more pleasant and more stimulating in its effects. It may be made by placing the person in a common chair, with his outside clothes removed, and a blanket thrown around it so as to exclude the external air. Under the chair a suitable tube or vessel must be placed, and a decoction of the herbs thrown into it. The steam, or vapour arising from this, surrounds the body, and after fifteen or twenty minutes, a free perspiration takes place. If the steam is insufficient to cause this perspiration, a brick or stone, previously heated, may be thrown into it; some substitute burning alcohol, or spirits, to produce the steam. A bath made in a manner still more simple, and which answers well for all domestic purposes, may be made in the following manner. Let the herbs, say pennyroyal, hoarhound, catnip, tansy, and wormwood; a double handful of each, be all boiled in a pail full of water, and the whole thrown into a tub of a suitable size; then, one or two narrow pieces of board, placed across the tub, and partially covered with a piece of flannel, or cloth of any kind. The person will sit over this in the manner as directed above, until he perspires freely. A heated brick, or stone, may be also necessary in this case. Care must be taken that there are sufficient openings by the

side of the strips of board, or the covering of them to admit the steam to the body; bathing the feet at the same time, and drinking freely of an infusion, or tea of catnip, will greatly aid the process of sweating.

The steam or vapour bath used in this manner, is very valuable in many diseases. It is useful in the commencement of all diseases, where it is necessary to promote perspiration, and where the patient is not confined to his bed. In fevers, rheumatism, colds, inflammation of the lungs, and other painful affections.

The vapour or steam bath may be applied in every case with advantage, which is attended with a torpid state of the vessels of the surface, and extremities of the body.

"Dr. D. T. Coxe of this city," says Dr. Bell, "has published a short paper on the efficacy of the vapour bath,* which he superintended at the time, in various diseases. In most of them the vapour was inhaled as well as applied to the surface of the body. The diseases enumerated, greatly relieved, or entirely cured, were chronic disease of the liver, rheumatism, ulceration of the fauces, pimples and other blemishes on the skin, enlarged spleen, with tendency to dropsy, dyspepsia, inflammation of the kidneys, hemicrania, influenza and erysipelas. In reference to the dyspeptic patients who used the bath, he informs us that it removed the costiveness of the bowels, and generally improved their complexion; perspiration was with difficulty brought on. We are told that 'here the benefit terminated. Indeed in one case the inhalation of so much warm vapour seemed to excite too much phlogosis in the stomach, as the patient was worse after taking several baths, and attributed to them this effect.' The erysipelas, says Dr. C., was one of the diseases which yielded readily and kindly to the influence of the vapour bath.

It was remarked that the peculiar odour of some of the articles, through which the steam was made to pass before its being applied to the body of the patient, was perceived in the urine.

The temperature of the bath is not regularly mentioned by Dr. Coxe. In one case, a person suffering under cutaneous eruption, accompanied with a torpor of the liver, it was at first about 104 degrees, in which the sweating was profuse. Each time the temperature was augmented, until it reached to between 115 and 120 degrees. This case serves to illustrate a fact mentioned by all writers on this subject, viz. the impunity with which a person who has been exposed to the elevated temperature of a vapour bath can subsequently bear cold. The person in question 'was in the habit of taking several tumblers full of cold water while in the bath; and neither in this case nor in any other in which this usage was followed, did any bad consequences result.'

In the apparatus used by Dr. D. T. Coxe, after the plan obtained from Mr. Whitlaw, and the invention of which was claimed by the latter, 'the vapour, generated in a boiler, escaped through a bent tube, furnished with a stop cock, into a small basin or receiver in the lower part of a box. The top of this receiver, into which herbs or other articles were placed, as well as the upper covering of the box was perforated, and allowed the free ascent of the medicated vapour into the upper or

* North American Medical and Surgical Journal, Vol. IV. p. 20—27.

curtained part of the contrivance where the bather sat, and either inhaled the vapour, or had it merely applied to the surface of the skin, according to the situation of his head, whether within or exterior to the inclosure.' ”

Sulphur Bath.

The sulphur and other medicated baths have been highly extolled for the cure of various complaints, but I have spent much time and money in testing their efficacy, and never could perceive that they possessed any advantages over the vapour bath.

Shower Bath.

This is a species of cold bath, an invention by which water falls from a height through numerous holes, or apertures, on the head and body. It may be conveniently made by boring numerous small holes through a tub or half barrel, which must be fastened a few feet above the head of a person. Another tub of a sufficient size to contain two pails of water, must be suspended over the other, and made to turn upon an axis. A rope or cord must be so fastened to this that it can be inverted, or turned downwards at pleasure. The person taking the shower bath, must place himself underneath uncovered, and having filled the tub with water, he will suddenly pull upon the cord, when almost instantaneously the contents of the upper tub or bath will fall into the lower one containing the holes, and the water will thus be conveyed in numerous and copious streams upon the head and body.

The apparatus should be inclosed, as well as the body, in a box or frame a few feet square, or a sufficient size to enable the person to stand, or turn round with convenience. A few boards or plank inclosed in a small frame is sufficient for the purpose.

This bath may be used in all diseases of the head, epilepsy, nervous complaints, head-ache, melancholy, hypocondriasis, obstruction of the menses, and such complaints as arise therefrom, delirium, general debility, &c.

Dr. Graham of this city, who has become very celebrated on account of his lectures on temperance and diet, recommends, I am told, the shower bath for numerous complaints.

CHAPTER XV.

MINERAL OR MEDICINAL WATERS.

SEVERAL Springs are found in the United States, holding in solution certain mineral, saline, or medicinal agents, which have become very popular, from their real or supposed efficacy in curing diseases. The term mineral water seems not very appropriate, for such are found exceedingly dangerous to drink. Some are impregnated with copper, and other deleterious substances, and are dreaded by man and beast. But those which hold in solution earthy substances, principally, or even a small portion of iron, exert some sensible effect on the animal economy. Hence it is not irrelevant to notice them. Those that are most frequented by invalids throughout the United States, are the following:

Ballston, N. Y.	New Lebanon, N. Y.
Saratoga, N. Y.	Schooley's Mountains, N. J.
Bedford, Pa.	Orange, N. J.
Yellow, near Philadelphia.	Stafford, Conn.
Do. Ohio.	Suffield, Conn.
Do. Virginia.	Pittsburgh, Pa.

The effects of these waters vary according to their component parts. Their medicinal effects, if any they have, depend not upon the mineral agents, as many suppose, if we except the tonic properties of iron, to which metal we will not object; but to other ingredients, such as salt or muriate of soda, lime, and magnesia, or the dilutent properties of the water itself. These, no doubt, sometimes benefit by their purgative or diuretic properties. But most of the benefit derived from these springs, is owing to a change of air, diet, exercise, &c. A celebrated physician, in treating upon the various mineral waters which abound in England, has the following excellent remarks:

"It is scarcely possible to read without a smile the numberless books, essays, and pamphlets, which have been written on this subject. It seems to be the favourite region for the exercise of fiction and fancy. The traditional tales of ancient miracles, said to be wrought by holy wells and consecrated springs, do not much surpass in extravagance the modern cures ascribed to those favourite haunts of valetudinarians by fraud, ignorance, and credulity. In printed *Guides*, as they are called, or *Pocket Companions*, to any of those fountains of health, it may be excusable to amuse us with a little romance; but we are sorry to find the same spirit pervading many medical treatises which should be distinguished by the most sacred regard for truth, and a just contempt of puerile embellishments.

Some allowance indeed should be made for the influence of local prejudices, and for the strong bias of interest and ambition on the mind of a professional man, who, residing near one of those springs, has, per-

haps, no other means of acquiring popularity and reputation, but by an encomium on its virtues, and a description, quite in the poetical style, of the beauties of the surrounding scenery. The latter is, indeed, a harmless puff; it seldom deceives any body; but is viewed in the same light as an auctioneer's advertisement of an estate, where frightful chasms are often described as curious grottos, a few furze-bushes as a shrubbery laid out by the finger of Nature, and a gallows as a hanging-wood. There is another particular, in which those highly-coloured landscapes that form the introductory part of almost every treatise on a medicinal spring, may defeat the proposed end, and that is, by exciting a reasonable suspicion that those waters are chiefly indebted for the high reputation of their efficacy to local circumstances, to the pleasant walks and rides, or the delightful prospects round them.

A display of all the attractions of the favourite spot is commonly followed by very minute details of chemical analysis, which are just of as little use to the generality of readers as the description of the scenery. A knowledge of the contents of any mineral water by no means implies a knowledge of its medical properties. These are to be learned by repeated experiments. Were it not for the evidence of facts, the late discoveries in chemistry, as far as they respect the analysis of mineral waters, would only tend to lessen their credit, by showing the little difference between them and any common water of the same purity and temperature. For instance, if we confined ourselves to mere speculation on the subject, how could we suppose that a quarter of a grain of the oxyd of iron suspended by a little fixed air in a whole quart of water, the largest quantity usually taken in the course of a day, could produce any remarkable or peculiar effects? The same thing might be said of the most celebrated springs; and many physicians of great professional eminence, arguing from this principle, have not hesitated to assert, that the cures performed by those springs were not owing to the ingredients with which they were impregnated, but to the simple elementary part, or what may be called pure water. It would not be easy therefore to determine, whether chemical analysis has furnished more arguments in favour of, or against, the boasted superiority of mineral waters.

Dr. Falconer, the author of one of the very few books relative to this subject, that contain something more than the gratification of idle curiosity, candidly confesses, that "chemical analysis, as far as it has been hitherto prosecuted, seems to give us a very imperfect view of the methods by which these effects (*i.e.* the medicinal effects of the waters) have been produced; and this circumstance has induced several persons to deny the truth of the facts altogether, or to represent them as highly exaggerated, and that such advantages (if any) as might be in truth received, were owing to collateral circumstances of uncertain and indeterminate efficacy, as change of air, diet, manner of life, and the like."

It is not therefore to the landscape-painter, or to the chemist, that we must look for any useful information on those points, but to the modest and judicious practitioner, who, like the author now quoted, watches with care, and reports with fidelity, the bad as well as the good effects of the waters he describes. the instances of their failure, as well

as of their success, in various disorders. I am sorry to add, that the fund of such truly valuable materials is as yet very scanty, and that I must confine myself to general remarks on the most frequented of our medical springs, so as to direct invalids to the fountain, from the use of which they may form some reasonable hopes of relief. As more particular instructions will often be necessary when they get to the spot, I feel it my duty to caution them against choosing for their medical guide any man, however high his reputation may be, who has distinguished himself as the loudest or most eloquent trumpeter in the indiscriminate praise of the waters near which he resides.

The like caution may prove still more serviceable to such of our countrymen as resort to foreign springs for medicinal purposes. A popular advocate for the use of any remedy is seldom to be relied on as a good physician; and we have always strong reason to suspect the skill or the integrity of a man, who speaks in a tone of confidence of the infallible efficacy of the waters which he prescribes.

Classification of Mineral Waters.

Mineral waters are usually classed according to their sensible qualities, as perceived by the touch, sight, taste, and smell, or according to some well-known ingredient, which may predominate in this or that particular spring. The most obvious division is into cold and hot fountains; but both these, being too comprehensive, are again subdivided into *chalybeate*, *saline*, *sulphureous*, and *calcareous*, from their being impregnated with *iron*, *salts*, *sulphur*, or *lime*. There are many still minuter distinctions, where two or more of those ingredients may be found united in the same spring, or combined with different sorts of *air*, which must have a very powerful effect in the internal use of the waters.

The first class of mineral waters, which I shall notice, are those called *chalybeates*, from a Greek word that signifies *iron*, the taste of which is very perceptible in them when fresh from the spring, though they lose it on being exposed for some time to the atmosphere. The reason is, that the small quantity of iron which they contain, being kept in solution by *fixed air*, when this evaporates, the iron sinks to the bottom, forming the fine ochre that lines the channel or water-course. As iron abounds in almost every part of the earth, it is no wonder that so many springs should be impregnated with it, in a greater or less degree, according to the quantity of fixed air they contain, by which the iron is held in a state of solution. Some of those waters have, in conjunction with the iron and fixed air, a pretty strong mixture of purgative salt, and are very different from the others in their effects as well as their taste. In order to distinguish each by a specific name, the former may be called *simple chalybeates*, and the latter *saline* or *purgative chalybeates*. They may be very properly chosen as examples or illustrations of the various medicinal effects of this numerous class of waters."

Ballston and Saratoga Springs.

None are more resorted to, or more indiscriminately used by the invalid, than these waters. Upon analysis, a bottle containing twenty-five ounces of the Ballston water, contains the following ingredients:

1. Carbonic acid, three times its volume.
2. Muriate of soda, 31 grains.
3. Super saturated carbonate of lime, 22 grains.
4. Muriate of magnesia, $12\frac{1}{2}$ grains.
5. Muriate of lime, 5 grains.
6. Carbonate of iron, 4 grains.

It appears by this, that the Ballston waters contain a larger proportion of fixed air, and a greater quantity of iron, than any other mineral water which has ever been discovered. It will be seen also that they contain a great portion of lime. Many who have drank them state that they have received great benefit; others say they have been much injured.

I shall first speak of cases in which *they are not beneficial*. First, in those complaints, which are attended with an increased excitement of the whole system, or with local inflammation, they are manifestly prejudicial. We infer this from the qualities of the water alone. It is also confirmed by experience and observation. They are injurious in pregnancy. A woman some years ago lost her life by the imprudent use of them. They are injurious in diseases of the mesentery and of the lungs. A person afflicted by the consumption, was evidently hastened to the grave by the frequent use of these waters. In cold, phlegmatic, bilious habits, they must be hurtful: also, in chronic diarrhoea and dysentery.

Diseases in which they are beneficial.—From the lime and salt, magnesia, &c. which they contain, and their operation upon the urinary organs, they may be useful in the dropsy, gravel, and other affections of the kidneys and bladder.

General Debility.—Being strong chalybeates, they possess some tonic powers; hence they are useful in dyspepsia, hypochondriasis, and hysteria. They are also serviceable in painful and suppressed menses; likewise in that species of consumption arising therefrom; also the rickets and scrofulous affections, &c.

The following are the remarks of Dr. Dyckman upon the use of these waters: "The doses must be regulated by the constitution of the patient, the state of the stomach, the nature and stage of the disease, and the effects produced. In large quantities, as from a pint to a quart, they usually operate gently as a cathartic; but in small doses their action is confined more particularly to the kidneys and the skin. In general, they should be drank till they produce a slight evacuation from the bowels. Care however should be taken never to distend the stomach so as to occasion inconvenience. If from one to two or three pints daily, produce no sensible effect, the quantity of fluid will be apt to prove more injurious as a load, than useful as a medicine.

In most instances, perhaps, it will be advisable to begin with small quantities, and repeat them often. When taken to an improper extent, particularly if they do not produce some effect as a purgative and diuretic, they not unfrequently occasion much distress and disturbance of the whole system, being followed by anxiety, head-ache or vertigo, perturbation, pains in the stomach and bowels, or spasms. They should not be employed when the stomach and bowels are overloaded, or just before or after meals. When intended to act as an aperient, the

proper time for administering them is in the morning before breakfast. Their operation will be facilitated by the exercise of walking or riding. Taken after a meal, they are less apt to affect the bowels, than they are the kidneys and skin.

Saratoga and Ballston springs are situated about twenty-five miles from the Hudson river, and run parallel with it, being about a day's journey from Albany. The country around them is rather elevated; the atmosphere is by many degrees cooler than in the neighbourhood of the cities of the United States, generally; the nights are always cool and comfortable; the air is extremely clear, and, upon the whole, the situation and the surrounding country are healthy and pleasant. All the fountains in this great valley, which lie pretty much in the form of a crescent, as far as they have been examined, appear, with few exceptions or variations, to possess the same *qualities*, differing only in the proportion of the substances common to all, and which are as follows: carbonic acid gas, muriate of soda, carbonate of soda, carbonate of lime, carbonate of magnesia, a trace of iron and iodine.

It would be almost impossible to give a minute detail of all the fountains in this immediate neighbourhood, the names of the principal of which, however, are the Congress Spring, Lowe's Well, the Flat-rock Spring, the High-rock Spring, Spa, Sulphur Spring, the Hamilton, the Columbian, the President, &c. As the properties of these springs are nearly alike, we shall therefore only dwell on those which are considered most interesting. The water in each of these fountains arises from a bed of sand, intermixed with stiff blue clay, and overlaying calcareous and schistose rock. The water of these fountains is perfectly clear and transparent; as it issues from its source, it sparkles briskly, but in some more than others, which is produced by the escape of the carbonic acid gas; the same occurs when poured from one vessel to another. Its taste is saline with a slight degree of bitterness, and its effects on the economy purgative or aperient. See Professor Silliman's Letter in the *Northern Traveller*, page 137.

Lowe's Well, Ballston.—The temperature of the water of this fountain is uniformly 52 degrees of Fahrenheit. The specific gravity is to that of distilled water, as 1008 to 1000, the temperature of both being 60 degrees. A glass of this water, just taken from the well, has a saline and pungent taste, with an evident chalybeate property. It is so very pungent as to affect the palate, and produce, at first, a slight giddiness and exhilaration of spirits. This water is also used for bathing.

According to Dr. Meade's analysis of this fountain, one quart of its water may be stated to contain the following substances: Muriate of soda, gr. 43; carbonate of lime, $13\frac{1}{2}$; carbonate of magnesia, $7\frac{1}{2}$; muriate of lime, $4\frac{1}{4}$; muriate of magnesia, $2\frac{3}{4}$; oxyde of iron, 1; carbonic acid gas, $60\frac{1}{2}$ cubic inches; nitrogen, $2\frac{1}{2}$.

Ballston Spa is situated about seven miles in a south-west direction from the springs at Saratoga. The water is very clear and sparkling, and when drunk betrays its chalybeate and gaseous properties to the taste. Dr. Steel remarks, that from the repeated application of the several reagents to the waters of this fountain, they appear to contain no properties to distinguish them from the waters of Saratoga. Its temperature is 50

degrees, and one gallon, or 232 cubic inches, on a careful analysis, yielded the following result: Muriate of soda, 159; carbonate of soda, 9; carbonate of lime, 75.5; carbonate of magnesia, 2.5; carbonate of iron, 7; carbonic acid gas, 210 cubic inches.

Schooley's Mountain.—Schooley's Mountain is a part of the granitic chain, extending in a north-east and south-west direction nearly across the state of New Jersey. Its height is more than six hundred feet from its base, and not more than eleven hundred feet above the level of the ocean. This elevation is sufficient to influence the temperature of these springs. The temperature of the water of the copious springs near the top of the mountain is only 50 degrees, while that of the deepest and coolest wells in New York is 54 degrees of Fahrenheit. These mineral springs are situated between two beautiful wooded mountains, and issue from a fissure of the perpendicular side of a rock, and the quantity of water gushing from this fissure may be estimated at six hogsheads per day.

According to Dr. W. J. McNeven, this water contains extractive, 0.92; muriate of soda, 0.43; muriate of lime, 2.40; muriate of magnesia, 0.50; carbonate of lime, 7.99, sulphate of lime, 0.65; carbonate of magnesia, 0.40; silex, 0.80; carbonated oxyde of iron, 2.00; loss, 0.41.

This water has been found advantageous in calculous concretions, and when the urine is blackened by it, is always held as a favourable symptom of its operating beneficially. The quantity generally drank is from ten to twenty half pint tumblers a day. One of the great advantages of this water is, that the carbonic acid it holds is altogether in a state of combination, and to this is generally ascribed its never producing flatulence or spasm in the weakest stomach, while it acts as a tonic like other chalybeates.

Pittsburgh Chalybeate Mineral Spring.—This spring is situated four miles south-west of the city of Pittsburgh. When the water remains undisturbed for a few hours, it is covered with a white pellicle; its taste is lively and rather pungent, with a peculiar ferruginous flavour, and it exhales an odour of sulphuretted hydrogen gas. Its temperature is very generally uniform, and is of 54 degrees of Fahrenheit. The specific gravity of the water differs little from the purest water, and is as 1002 to 1000.

According to Dr. Meade's analysis, it contains muriate of soda, 2; muriate of magnesia, $\frac{1}{2}$; oxyde of iron, 1; sulphate of lime, $\frac{1}{2}$; carbonic acid gas in one quart of water, 18 cubic inches.

Dr. M. thinks this water even superior, in a medicinal point of view, to the water of the *Schooley's Mountain* spring, which has long sustained a high character for its chalybeate properties.

Yellow Spring.—This spring is situated in Green county, (Ohio,) sixty-four miles from Cincinnati. This is a copious vein, which bursts from a fissure in the silicious lime-stone rock; the water is transparent, and emits no air bubbles. Its temperature is of 52 degrees. Its taste is that of a slight chalybeate. From the examinations made, it seems to contain some oxyde of iron and carbonate of lime, dissolved by the agency of carbonic acid gas, and slightly charged with saline particles. Its sensible effects on the human body seem to be inconsiderable; it has, however, been used with advantage in cases of chronic debility, in which chalybeates are indicated.

New Mineral Spring at Albany.—This spring was discovered in the summer of 1826, in a very singular manner. Messrs. Boyd and M'Culloch, anxious to procure water for their brewery, were induced to bore for it in the lower part of the city; when they had proceeded to the depth of 480 feet, instead of obtaining fresh water, the fluid which ascended had a peculiar saline taste, and a sparkling appearance. Its temperature is uniformly from 51 to 52 degrees of Fahrenheit's specific gravity as 1010 to 1000. This water is purely saline, somewhat pungent, rather agreeable. If left to stand for a little while, the water, which at first was transparent, becomes perfectly opaque, having, however, formed previously a pellicle on its surface, which falls to the bottom, and then loses its agreeable and acidulous taste, becoming perfectly vapid, and tastes like a solution of marine salt in water.

According to Dr. Meade's analysis, it contains the following articles, but, in order the better to understand its properties, we shall give also Dr. M.'s analysis of the Congress Spring, and of the Public Well at Ballston. The following are the contents of each in one pint of water.

Congress Spring.		Public Well, Ballston.		Albany Water.	
	Grs.		Grs.		Grs.
Muriate of soda,	51½	Muriate of soda,	21	Muriate of soda,	59
Carbonate of lime,	13¾	Carbonate of lime,	4½	Carbonate of soda,	5
Magnesia,	8½	Carb. of magnesia,	5½	Carbonate of lime,	4
Muriate of lime,	1¾	Muriate of lime,	1¾	Carb. of Magnesia,	1½
Muriate of magnesia,	2½	Muriate of magnesia,	¾	Carbonate of iron,	1
Oxyde of iron,	¼	Oxyde of iron,	½	Muriate of lime,	½
Total,	78¼	Total,	34½	Total,	71
Carbonic acid gas,		Carbonic acid gas,		Carbonic acid gas,	
cubic inches,	33	cubic inches,	30½	cubic inches,	26

Bedford Mineral Springs, Pennsylvania.—Bedford is a village situated on the great western turnpike from Philadelphia to Pittsburgh, a few miles east of the chief elevation of the Alleghany mountains. The springs, the chalybeate excepted, are located about two miles south of Bedford, in Shover's valley, which is watered by a creek bearing the same name.

The principal springs are *Anderson's*, *Fletcher's*, the *Lime-stone* spring, the *Sweet* springs, the *Sulphur* spring, and the *Chalybeate* spring. These springs are distant from Philadelphia 195 miles, and from Baltimore, or Washington city, 130 miles.

Anderson's.—The waters of this spring issue, in a very copious stream, from a fissure in a lime-stone rock. The water is clear, lively, and sparkling. Its temperature was of 58 degrees of Fahrenheit, whilst the thermometer stood at 70 degrees. Its specific gravity is 1029. It has a peculiar saline taste, resembling a weak solution of Epsom salt in water, and impregnated with carbonic acid. This water is inodorous. On exposure in an open vessel it becomes vapid.

According to Dr. W. Church, a quart of this water yielded the following substances:—

Sulphate of magnesia, 20 grs.; sulphate of lime, 3¾; muriate of soda, 2½; muriate of lime, ¾; carbonate of iron, 1¼; carbonate of lime, 2; loss, ¾; carbonic acid gas, 18½ cubic inches.

Fletcher's.—This fountain furnishes also a very abundant supply of water. Its temperature was 55 degrees of Fahrenheit, while the thermometer stood at 70 degrees. Dr. Church's experiments on this water come nearly to the same results as with the preceding. He remarks, however, that it contains rather more iron and common salt, and less magnesia. All the other remarks made about Anderson's spring are equally applicable to this spring.

These waters are exhibited in a great many affections, but particularly in chronic diseases, as are almost all the fountains of this description.

Saline Springs, Big Bone Licks—Are fountains, several in number, situated in the state of Kentucky, near the banks of the Ohio, twenty-two miles south-west of Cincinnati. Previous to the discovery of the saline springs on the great Kenhawa, which afford a great quantity of salt, the water of these springs was also employed in the manufacture of salt. It holds in solution, besides *common salt*, *muriate of lime*, *sulphate of soda*, or *magnesia*, and a few other salts of less activity, but no *iron*. These springs yield a great quantity of *sulphuretted hydrogen gas*, which continually escapes in bubbles; and seem also to contain some *gallic acid*, from their effects on the sulphate of copper and iron. The temperature is 57 degrees. The taste and smell are sulphurous, and offensive to new comers, but this effect is transient, and soon after a taste of common salt predominates. They have no action on the circulation, but their effects on the alimentary system, kidneys, and skin, are very great. They frequently produce in a few days a violent itching, followed by an eruption of pimples or pustules, which are sometimes accompanied with large *boils*. These waters can never be serviceable to debilitated persons; but may be useful, and at times peculiarly adapted to torpor, or obstruction produced by acute disease in the lungs, or, in a word, in any of the viscera, which is of short standing, and has not exhausted the patient. From a pint to a gallon may be taken daily; the quantity drunk at first ought to be, however, very small.

An author speaking of the effects of Chalybeate mineral waters, thus remarks: "It gives a gentle stimulus to the relaxed nerves, and contributes to restore their proper tone. It affords great relief in many complaints of the stomach, in flatulencies, bilious vomitings, irregular or imperfect digestion, and other consequences of either debility or intemperance. It promotes the circulation of the blood, and the various secretions; but more particularly that of urine: and this latter circumstance is one of the best proofs of its agreeing with the habit of the patient. In short, its natural tendency in the cases to which its stimulant and tonic powers are adapted, is to raise the spirits, and increase the general vigour of all the functions.

These waters are considered serviceable in what may be called the sexual disorders of females, arising from a great weakness or derangement of the uterine system; such as an immoderate flow of the *menses*, green sickness, *fluor albus*, and other similar indispositions, which are not only relaxing and painful in themselves, but are often the cause of abortion, or of sterility. If the profuse flow of the *menses* should be accompanied, as it often is, by feverish symptoms, by pain in the back, and local irritation, the stimulus of the waters might then prove injuri-

ous. Indeed, they are improper in all inflammatory cases, except the feverish irritation which attends the green sickness, and which is more frequently abated than increased by the use of chalybeates.

In all obstructions of the urinary passages, and other complaints of that region, those waters are found of singular efficacy; for though, as before observed, they in some degree promote every secretion, yet their chief and most regular determination is to the kidneys; and experience has fully proved the good effects of their gently stimulant and diuretic properties.

We may proceed still farther in our recommendation of these waters, and prescribe them with great probability of success in such chronic disorders as arise from slow beginnings, and are attended with great laxity and weakness of the solids, but without much organic disease. It is necessary to attend to this material exception; because a general weakness may be often brought on by morbid affections of the mesentery, of the lungs, or of some other important organ, to the cure or relief of which they would be very inadequate. Even in complaints where they have commonly proved efficacious, cases must often occur that require the exercise of the nicest judgment and discrimination.

As some persons may be too soon prejudiced against the use of chalybeates by any unpleasant or unexpected sensations at first, it is proper to inform them, that giddiness and sometimes a heaviness of the head, nausea, vomiting, a slight pain about the heart, and a sense of fulness over the whole body, though by no means uncommon symptoms on beginning a course of these waters, will disappear after a little use. It is only when they stubbornly continue, that they should be regarded as a proof that the waters are not suited to the nature of the complaint or to the patient's constitution. The nausea or sickness being often occasioned by the coldness of the fresh-drawn water, acting on an empty or a very weak and irritable stomach, it is advisable, in the first instance, not to drink the waters fasting, till the stomach becomes gradually reconciled to them; and, in case of extreme irritability, it is a common and judicious practice to immerse in hot water a bottle filled with the chalybeate, and well corked, that the chillness may be diminished, with as little evaporation of the fixed air as possible.

This account of the primary and immediate effects of the water used internally will enable any patient to judge, from his own feelings, whether it agrees with his constitution or not. If it excites, on being first taken, a pleasing glow in the stomach, followed by an increase of spirits, and of appetite, particularly for breakfast, and, above all, a rapid determination to the kidneys, there is the greatest probability of its proving serviceable. But if it occasions head-ache, thirst, and dryness of the tongue;—If it sits heavy on the stomach, or produces sickness, and does not pass off by urine or perspiration;—it may be fairly concluded, that its continuance would do injury, unless these symptoms can be removed.

If we come next to consider the external application of those waters, we shall find, in the first place, that they unite all the medicinal advantages of warm baths, from about a hundred and six degrees of heat to any inferior degree that may be desired. The extent also of the baths, which affords room to move about in them freely, and the per-

manence and uniformity of their warmth, are not unimportant recommendations. But Dr. Falconer is of opinion, that the waters possess some further powers or specific qualities superior to those of common water of the same temperature. He thinks that their action on the nervous system is more stimulating than a common warm bath;—that they raise the pulse and heat of the body to a higher degree, yet are much less apt to produce a violent perspiration;—that they remarkably increase the urinary discharge;—and that, so far from causing any relaxation or weakness, the bathers are observed to be in general more alert and vigorous, and to have a better appetite on the days of bathing than in the interval.

The diseases, in which this practitioner very accurately describes the good effects of the waters, are the green sickness, particularly before any considerable affection of the stomach takes place, or any feverish symptoms appear; visceral obstructions, when the consequences of intermittent fever, or of long residence in hot climates, if the disorder in these cases has not advanced too far; the palsy, from a great variety of causes; the gout, in that stage of the complaint, when the inflammatory symptoms, if any have preceded, have in a good measure abated, and a degree of weakness and want of tone in the system begins to take place; the chronic rheumatism, and the acute also, provided the feverish disposition be previously allayed by proper evacuations; white swellings on the knee; hip cases; weakness of the organs of digestion; the colic, accompanied with hysterical symptoms, or produced by the poison of lead; the jaundice, when arising from simple obstruction of the biliary ducts; hypochondriac and hysterical complaints; St. Vitus's Dance; spasmodic affections of the womb and painful menstruation; and, lastly, in many cutaneous, but more especially leprous eruptions.

I have confined myself here to a bare outline, which may be sufficient for the general direction of valetudinarians, who must avail themselves of more particular advice at the fountain-head. Almost every case will require a peculiar mode of treatment; and great caution will be found necessary to prevent fatal mistakes. I cannot too often repeat that the more powerful any remedy is, the more liable it is to abuse; and though the efficacy of the waters has been established in some of the most stubborn and afflicting disorders, yet their misapplication has also been often attended with very serious consequences.

No less regard should be paid to the proper use of the bath. A short stay of five or six minutes is most advisable at first; and if this trial produces no symptoms that are disagreeable, but on the contrary, seems to improve the health, spirits and strength, a longer stay may be gradually indulged, till it comes to half an hour, but never to cause lassitude, faintness, or disgust.

Acidulous, or Gaseous Mineral Waters.

These waters are limpid and colourless; they have an acidulous and fresh taste, a sharp, but very weak smell. They redden the tincture of litmus and form with lime water a flaky precipitate. To the presence of carbonic acid, they are indebted for most of their properties. They very often contain five or six times their volume of that gas; thus when

they are agitated or heated, a great number of bubbles escape. Salts are also found in them, such as carbonates, hydro-chlorates and sulphates of lime, of soda, and of magnesia, but in too small quantities to render them purgative; a certain number of these salts, insoluble in water are kept in solution in them by carbonic acid; indeed, by the disengagement of this gas, these waters lose their transparency, and a whitish precipitate is formed, more or less abundant, of carbonate of lime or of magnesia.

The springs of gaseous mineral waters are either cold or thermal. The former are cooling, quench thirst, excite slightly the organs of digestion, increase in a remarkable manner the secretion of urine; but they react promptly on the brain. In fact, their use often causes giddiness, a slight inebriation, and even head-ache, agitation, syncope, &c. The thermal waters are more stimulating. It appears therefore, that these mineral waters act on the digestive canal like temperants; but the influence they exercise on the nervous system, is evidently of a stimulating nature.

The cold gaseous waters are exhibited with success in small quantities as cooling drinks, in cases of slight inflammation of the digestive organs; in larger doses, they succeeded in a great number of chronic diseases, and especially in those proceeding from weakness of the stomach. They are employed in nervous affections, hypochondriasis, chlorosis, amenorrhœa, calculous affections, chronic catarrhs, obstructions of the liver, &c. The thermal waters of this class, are very useful, especially as baths, in diseases of the skin, rheumatic and arthritic affections, white swellings, and other diseases of this nature.

The principal springs of acidulous or gaseous mineral waters in this country, are the following:

Thermal Waters. Lebanon Spring.—This is a spot beautified both by nature and art, twenty-six miles east from Albany, and about two miles east from the village of New Lebanon, which is itself situated in a little valley, surrounded by fine hills and on the side of one of these hills, is the fountain, from which issues the clear and warm water, which although possessed of no strong mineral properties, has nevertheless given to this place its celebrity. The waters of this spring are abundant, and much esteemed for bathing, always keeping the temperature of 72 deg. Fahr. It resembles very much the Buxton water in England, although less warm. The waters of Bristol, England, are another instance of tepid waters being almost entirely without mineral properties. The present fountain scarcely possesses any medicinal virtues, as may be seen by its contents below and as stated in Dr. Meade's analysis.

Two quarts of the water contain muriate of lime, gr. 1; muriate of soda, $1\frac{3}{4}$; sulphate of lime, $1\frac{1}{2}$; carbonate of lime, $\frac{3}{4}$; nitrogen gas, 13 cubic inches; atmospheric air, 8.

Bedford Lime-stone Spring.—The water of this fountain, which issues from the fissures in a lime-stone rock, is a pure lime-stone water. Its temperature, 51 deg. Fahr. the thermometer being at 70 deg. There is also a *sweet spring*, the water of which is as pure as distilled water, with the exception of the carbonic acid it contains, and which may be easily expelled from the water by boiling it. See Bedford mineral springs.

Sulphurous Mineral Waters.

The mineral waters belonging to this class, and called *sulphurous*, *hepatic*, &c. are very remarkable for their foetid smell, similar to that of rotten eggs, and by their bitter, brackish, and very unpleasant taste. In general they are limpid and unctuous. The springs which furnish them are mostly warm; there are, however, many cold ones. The chemical composition of these waters varies considerably, but they all contain some hydro-sulphuric acid, in a free state, or combined with an alkali. The other substances found in them are sulphates, hydrochlorates, and carbonates of soda, magnesia, lime, and even occasionally, free carbonic acid, and a peculiar vegeto-animal matter.

The sulphurous mineral waters act upon the whole economy as excitants. They promote appetite, render the circulation more active, and produce an abundant perspiration, or a considerable discharge of urine. Indeed, their continued employment produces even a febrile motion, which may last for several days.

These waters are employed either internally or externally in a great number of cases. In herpetic eruptions and in many other cutaneous affections, they may act advantageously. They are likewise used with success in chronic catarrhs, when it is necessary to stimulate in a gentle and continued manner, the mucous membrane of the bronchiæ and of the pulmonary cells. They are also highly and justly recommended for their efficacy in the treatment of scrofulous affections, and in engorgements of the lymphatic glands. Finally, they are administered in chronic rheumatism, gout, &c.

The principal sulphurous waters in this country, are the following:—

Sulphur Spring, near Saratoga.—Directly up the Kayadarossaras Creek, and near its banks, and two or three miles from Ellis's Spring, is situated a strong-scented sulphur spring, so much so as to enable us to smell its emanation at some distance from it. The water is clear, and is only slightly agitated by the escape of gas. Its taste is unpleasant, partially resembling bilge water. Its temperature is 50 deg. Fahr. This water has been used in various cutaneous diseases, both internally and externally.

Dr. Steel, on analysis, has obtained from a gallon of water of this spring, the following substances: muriate of soda, grs. 23.6; carbonate of soda, 1.4; carbonate of lime, 33.1; carbonate of iron, 1.9; carbonic acid gas, 43.5 cubic inches; sulphuretted hydrogen gas, 11 cubic inches.

Sulphur Spring, Ballston.—Within a few feet of Lowe's Spring is situated this sulphurous fountain, which announces its character or properties to the smell and taste. Its temperature is 52 deg. This water, like the preceding, is used for bathing, but is sometimes drank, and is supposed to be highly efficacious in cutaneous affections.

According to Dr. Steel's analysis, a gallon of water yields the following substances: muriate of soda, grs. 64; carbonate of soda, 6; carbonate of lime, 30; carbonate of iron, 4; carbonic acid gas, 144 cubic inches; sulphuretted hydrogen gas, 7.

Bedford Sulphur Spring.—This water, as well as sulphurous fountains generally, exhales a very strong odour of sulphuretted hydrogen gas. Its temperature is 56 deg. Fahr. Dr. Church, by chemical experiments, has ascertained it to contain carbonic acid, sulphuretted hydrogen gas, small quantities of lime, magnesia, and muriate of soda. It contains no iron. See Bedford Mineral Springs.

An injurious prejudice prevails in this country, (says a writer) that all diseases must be cured by medicines taken into the stomach, and that the more violently these medicines operate, they are the more likely to have the desired effect. This opinion has proved fatal to thousands, and will, in all probability, destroy many more, before it can be wholly eradicated. Purging is often useful in acute diseases, and in chronical cases may pave the way for the operation of other medicines: but it will seldom perform a cure; and, by exhausting the strength of the patient, will often leave him in a worse condition than it found him. That this is frequently the case with regard to the more active mineral waters, every person conversant in these matters will readily allow.

Strong stimulants applied to the stomach and bowels for a length of time must tend to weaken and destroy their energy; and what stimulants are more active than salt and sulphur, especially when these substances are intimately combined, and carried through the system by the penetrating medium of water? Those bowels must be strong indeed which can withstand the daily operation of such active principles for months together, and not be injured. This, however, is the plan too generally pursued by those who drink purging mineral waters, and whose circumstances permit them to continue long enough at these places of fashionable resort.

Many people imagine that every thing depends on the quantity of water taken, and that the more they drink, they will the sooner get well. This is an egregious error; for, while the unhappy patient thinks he is by this means eradicating his disorder, he is often, in fact, undermining the powers of life, and ruining his constitution. Indeed, nothing can do this so effectually as weakening the powers of digestion by the improper application of strong stimulants. The very essence of health depends on the digestive organs performing their due functions, and the most tedious maladies are all connected with indigestion.

Drinking the water in too great quantity not only injures the bowels, and occasions indigestion, but generally defeats the intention for which it is taken. The diseases, for the cure of which mineral waters are chiefly celebrated, are mostly of the chronic kind; and it is well known that such diseases can only be cured by the slow operation of alteratives, or such medicines as act by inducing a gradual change in the habit. This requires length of time, and can never be effected by medicines which run off by stool, and operate chiefly on the first passages.

Those who wish for the cure of any obstinate malady from the waters of the sulphurous or saline class, ought to take them in such a manner as hardly to produce any effect whatever on the bowels. With this view, a half-pint glass may be drank at bed-time, and the same quantity an hour before breakfast, dinner, and supper. The dose, how-

ever, must vary according to circumstances. Even the quantity mentioned above will purge some persons while others will drink twice as much without being in the least moved by it. Its operation on the bowels is the only standard for using the water as an alterative. No more ought to be taken than barely to move the body; nor is it always necessary to carry it even this length, provided the water goes off by the other emunctories, and does not occasion a chillness or flatulency in the stomach or bowels. When the water is intended to purge, in cases where the nature of the patient's complaint requires a strong determination to the bowels, it may be necessary to drink a pint or two before breakfast.

I would not only caution patients who drink those waters over-night, to avoid hearty suppers, but also against eating heavy meals at anytime. The stimulus of water, impregnated with sulphur and salts, seems to create a false appetite. I have seen a delicate person, after drinking the waters of a morning, eat a breakfast sufficient to have served two ploughmen, devour a plentiful dinner of flesh and fish, and, to crown all, eat such a supper as might have satisfied a hungry porter. All this indeed, the stomach seemed to crave; but this craving had better remain not quite satisfied, than that the stomach should be loaded with what exceeds its powers. To starve patients was never my plan; but I am clearly of opinion, that, in the use of all the strongly purging mineral waters, a light and rather diluting diet is the most proper; and that no person, during such a course, ought to eat to the full extent of what his appetite craves.

Exercise is not less conducive to the salutary end in view than temperance. It promotes the operation of the waters, and carries them through the system. It may be taken in any manner that is most agreeable to the patient; but he ought never to carry it to excess. I scarcely need repeat a remark often made in other parts of this work, that the best kinds of exercise are those connected with amusement. Every thing that tends to exhilarate the spirits, not only increases the efficacy of the waters, but acts as a medicine. All those who repair to the fountains of health ought therefore to leave every care behind, and to make themselves as cheerful and happy as possible. From this conduct, assisted by the free and wholesome air of those fashionable places of resort, and also the regular and early hours which are usually kept, the patient often receives more benefit than from using the waters.

I have met with many instances of the most mischievous effects produced by drinking the waters in cases where they were absolutely improper, and adverse to the nature of the disease. When people hear of a wonderful cure having been performed by some mineral water, they immediately conclude that it will cure every thing, and accordingly swallow it down, when they might as well take poison. Before patients begin to drink the more active kinds of mineral waters, they ought to be well informed of the propriety of the course, and should never persist in using them, when they are found to aggravate the disorder.

On the other hand, I often witnessed the happy issue of experiments made with judgment and caution, when the greatest benefit was deri-

ved from the proper use of the waters in various eruptions on the skin, of the most distressing nature; in rheumatism complicated with scorbutic complaints; in obstructions of the glandular and lymphatic system; and in diseases of the first passages, accompanied with, or proceeding from, inactivity of the stomach and bowels, acidity, indigestion, vitiated bile, worms, putrid sores, the piles, and jaundice. They answer two very important purposes; first, when taken in small quantities, acting as an alterative, and inducing, by their mild operation, a gradual change in the habit; and, secondly, when employed in larger doses where purging is indicated, fulfilling that intention in the most desirable manner, without irritating the nerves, or weakening the patient so much as other purgatives. After a little use, almost every body can drink them without any great disgust, though they are at first no less nauseous to the taste, than offensive to the smell."

I shall only add, that the external use of sulphurous waters are deemed a very powerful auxiliary in many of the disorders for which they are resorted to, particularly those of the cutaneous class.

Mineral Waters in Europe.

Various parts of Great Britain and France, are likewise distinguished for mineral or medicinal waters; the properties of which are very similar to the above. Among these are the following:—

Aix, in Provence,	Harrowgate,	Pymont,
Barege,	Hartfell,	Scarborough,
Bath	Holywell,	Spa,
Bristol,	Leamington,	Sedlitz,
Buxton,	Malvern,	Sea-water,
Borset,	Matlock,	Seltzer,
Cheltenham,	Moffat,	Tunbridge,
Carlsbad,	Passy, near Paris,	Vechy, and others
Epsom,	Rouen, &c.	of less note.

The remarks on the mineral waters of the United States, are applicable to those in France, England, and other parts of Europe.

CHAPTER XVI.

ELECTRICITY.

THE application of electricity having been recommended for the cure of so many diseases, it becomes proper to make a few remarks upon its nature and effects. Ever since the discoveries made by Doctor Franklin, it has been resorted to by medical men and others, for the alleviation and cure of disease; and in the present day, many consider it as a specific or universal panacea, that contains the power of ridding the system of every complaint that 'flesh is heir to.' I know of no disease for which its advocates have not strongly recommended it; but I have very satisfactory evidence that most of the cures said to have been wrought by its agency, must, like many other reputed remedies, be owing more to dame nature, than any specific or medicinal effects which they possess.

I have had ample opportunities, since I commenced the practice of medicine, of testing its efficacy. I have kept a machine and superintended its administration, and after abandoning it for want of success, I have recommended my patients to several persons in this city, two of whom are professed electricians; and I am now constrained to state that I am very much disappointed in its operation and effects, having seen very few cures performed in the multiplicity of cases in which it has been applied; but some diseases have been aggravated by it.

In palsy, it is said to have been beneficial, and probably has in some cases relieved or cured it, particularly when it has been partial, or confined to a particular part of the system. But in other cases, I have evidence that it has proved injurious. It may be serviceable in rheumatism, and some other chronic complaints. It has been highly extolled in inflammatory diseases, but there is no evidence that it proves beneficial in any of them. It has also been highly spoken of in cancers and schirrhous tumours of the female breast; but I have tried it in these complaints, and have never derived any advantage from it. Some good, no doubt, is sometimes derived from the effect it has upon the imagination. I wish, however, not to dissuade any one from trying it as an experiment in those diseases in which it is highly recommended, and particularly where other means are found unavailing.

CHAPTER XVII.

NOSTRUMS AND PATENT MEDICINES.

WE deem it necessary to make a few remarks on the numerous nostrums or quack medicines offered for sale. The public are as much, or more duped by taking these preparations, as from those minerals or poisons administered undisguisedly. It is astonishing to witness the facility with which many suffer themselves to be imposed upon, by the pompous advertisements of some panacea, catholicon, pill, syrup, or universal remedy, which they purchase at a high rate from some pretender to a great secret or nostrum. The most foolish and palpable preparation is purchased and taken with avidity, provided it is kept a secret and highly extolled or puffed.

Our papers are filled with numerous nostrums, highly recommended for the cure of all diseases. "Whoever advertises any medicine," says Tissot, "as an universal remedy for all diseases, is an absolute impostor; such a remedy being impossible, and contradictory in our present state of knowledge. I freely appeal to every sensible man, who will reflect a little on the different causes and symptoms of disease, whether this is not the case."

Did people know the ingredients of the nostrums which they purchase, they would lose all confidence in them. Secresy, in the minds of the ignorant and vulgar, stamps a great value on every medical preparation. Cheats and impostors know this, and thus take the advantage of such persons to palm upon them their spurious trash.

Some allowance, it is true, must be made, when we reflect upon the want of a correct system of medical practice. Many persons, finding no benefit from *learned*, fly to *ignorant*, *quacks*, for relief. Unhappily as it were, they are burnt by standing between two fires. When a man advertises that he can cure all diseases, or when he publishes a *certain cure* for all complaints, look out for an impostor. No matter how many certificates are appended or exhibited. So, whenever we see a person professing to set or reduce bones, when there is neither dislocation nor fracture, then beware of a shameless interloper and an empyric. Look out also for those who arrogantly profess to have an infallible cure for cancer and some other complaints in all stages; they will generally be found deceivers. The basis of their applications is usually *arsenic*, *mercury*, or some other poisonous article.

Most of the lozenges and worm preparations contain *mercury*; also many other remedies highly extolled, contain the same deleterious article.

Many of the syrups and panaceas denominated *vegetable*, contain *corrosive sublimate*.

Many of those persons who profess to cure disease by *vegetable remedies*, make use of *mercury* almost exclusively, in some form or other.

I here give the advertisement of a doctor, who is repeatedly resorted to in the city of New-York by a certain class of invalids, by way of specimen for puffing some of these nostrums:

"*Salus Populi Suprema Lex.* Dr. H——, having been legally bred to the medical profession, confines his attention to a particular disease, which engages his most profound attention. His experience is very great; his success astonishing. Strangers may find some difficulty in making a choice. Dr. H—— looks down with conscious pride upon all competition; his real respectability, skill, and integrity, challenge the severest scrutiny. A plurality of offices are provided," &c.

This only is given as a specimen, but the newspapers are full of them.

The following receipt is recommended by a doctor:

"For gout, rheumatism, cramps, contractions of the sinews, &c.—Take a young fat dog, kill him, scald and strip off his hair. Then, from a small incision, take out the contents of his belly, and put in the cavity two handfuls of nettles, two ounces of brimstone, a dozen of eggs and four ounces of turpentine, well mixed together. Then sew up his belly, and roast him before a fire, and save the oil. This is to be applied to the parts affected, warm, and rubbed in by the fire.

Or, the dog being prepared in the same manner, fill his belly with a pint of red pepper, a pint of fish worms, the bark of sassafras roots, and three or four green frogs; roast him in the same manner, and save the drippings. This is a valuable ointment for rheumatisms, contractions of the tendons, nervous affections, burns, &c.

That these preparations, although singular, are valuable, no one need doubt."

Sometime since a German came to this city and proposed to cure all diseases by inspection of the urine. The old women, girls, as well as men, who imagined they were sick, sent a specimen of the *precious liquid* for the wise doctor to learn their symptoms, and prescribe for their diseases. After pocketing a good fee, he ordered each one, no matter what the disease, to be *copiously and repeatedly bled*. The consequence was, that their complaints were exasperated and several destroyed. I might easily fill a volume on this subject; but a few hints to the wise is sufficient.

I will make, however, a few more remarks on nostrums or quack medicines. First, of Swaim's Panacea:

A man by the name of Swaim came to this city some years ago, afflicted with a disease, it is said, and became in possession of some medical preparation which cured him. He then commenced making experiments upon it by giving it to various persons; put it up into porter bottles; denominated it a "panacea" or universal medicine, and then began to vend it. He very cunningly and artfully procured the recommendations of several noted physicians of Philadelphia and New-York. These men, more, no doubt, for the novelty of the thing, or for the sake of having their names appear in the newspapers, highly puffed his nostrum, which gave great notoriety and attached much importance to it. People of all classes purchased the article with great avidity, for almost all complaints, for it promises to cure almost every thing. The physicians, who recommended it, thus put a knife into the hands of

their enemies to cut their own throats. They afterwards regretted that they had given their signatures, and stated that they had been deceived in the nostrum; that, while it had benefitted some, it had injured others; that it contained mercury, and had salivated many.

When Swain ascertained that mercury had been detected in the medicine, and was accused of it, he no longer added it. He then went before a justice of the peace or a commissioner, and swore *that his panacea did not contain one particle of mercury*, which, no doubt, was the case from the time he took the oath. But let the reader carefully observe the sagacity of the man. Mercury must be given, or the panacea will not have the desired effect. He therefore takes good care, in the directions accompanying each bottle of the panacea, to tell the patient to take mercurial or "blue pills." From this we see, that the whole properties of this medicine depends upon sarsaparilla, the only active vegetable agent, and mercury. I have tried the medicine again and again, but have never seen the least beneficial effect from it, though in some cases it has no doubt been useful.

There is the most incontestible evidence that it has salivated numerous individuals. Among the number, Dr. Hooker, of New-Haven, states that he has known profuse salivation follow the use of it. This panacea is no doubt similar to that which is called the French Rob. Since Swain has come out, numerous others have appeared of a similar character.

Dr. Mallison has the following remarks on Nostrums and Patent Medicines:—"One of the greatest evils to which our country is exposed, and one also which has not been felt the least, is the use of nostrums and patent medicines; the number of which, that are offered for sale at the present day, are almost innumerable: each of which is said to be a specific for nearly, or quite, all of the diseases to which a human being is subject. Now it is high time the public should open their eyes and resist those gross impositions which have been the cause of many premature and untimely deaths. The honest and unsuspecting sufferers, who are labouring under afflicting diseases, feeling anxious for relief, and being induced by the high recommendations attached to these drugs, and likewise being ignorant of their composition, vainly trust in them for relief, till many times their complaints advance beyond the reach of the most efficacious and judiciously applied remedy. This has come under my immediate observation more times than one. I am well aware, however, that certificates are sometimes obtained purporting cures to have taken place while the person was using some of those nostrums; but I am fully inclined to believe that most of such cures were accomplished by the powers of nature or the vis conservatrix overcoming the effects of the disease, and I think that many times it had to overcome the effects of the remedy also. For it is an absolute fact, of which any person may satisfy themselves, if they will take the trouble only to inquire of those persons who have been in the habit of using those articles, that nine times out of ten they have either been of no use or actually injurious. And if certificates should be obtained from all who have used these medicines according to the real effect they have produced. it is certain that not more than one out of ten would be

in support of them. Did the public know the composition of these nostrums, which they certainly ought before they hazard the application of them, they would certainly detest the most of them as odious and baneful. The nostrum called 'Panacea,' contains for its base, *corrosive sublimate*, upon which all its virtues and activity depends. This is a fact which has been demonstrated by myself and others. Corrosive sublimate is a preparation of *mercury*, of which if one grain should be taken into the stomach, it would undoubtedly produce death in a short time, if not immediately counteracted. I know of a case of scrofula, in this county, where the panacea has been given and relied on for a cure until the young lady has become a spectacle to behold, and in all probability will remain a miserable and distressed object during the remainder of her life, in consequence of this *deleterious mercurial effect*, which is now one of the greatest scourges to our land. The Welch Medicamentum, of which it is said, "if a person uses he will never need or require the healing art," is nothing more nor less than a compound *tincture of aloes*, diluted and mixed with a few aromatics, more to disguise it than to sooth its operation. The active articles in this preparation, are fit for little else than medicine for horses, on which they operate, it is said, very well. A celebrated remedy recommended and sold for a preventive and cure for fever and ague, contains a quantity of *arsenic*. The virtues of Anderson's Cough Drops depends on the opium which they contain. A preparation sold for the cure of dyspepsia, and which has gained considerable celebrity, is wholly dependent on prussic acid for its active agency. Now, prussic acid is a substance which, if one drop should be applied to the tongue, in its concentrated state, would produce death as quick as an electric shock. I have known this article, also, to be taken until the society of the person, which was once pleasant and delightful, was rendered tedious and disagreeable even to his nearest friend, in consequence of the nervous and hypochondriacal affliction it produced.—What a curse is this!—How loaded with guilt must be the author of such a calamity! It calls for a voice as loud as the thundering of the heavens to speak against it. I have been waiting for an elder practitioner of medicine to take up the pen against these life destroying agents, until the scenes of human misery which were presented before my eyes, forbid my waiting any longer. Where is the man who knows these statements to be correct, and who has the least spark of a philanthropic spirit, can sit and hold his peace, and see humanity and innocence thus tortured. I write the above through a feeling sense of duty, knowing that the high recommendations which most of these nostrums have received, to be *base fabrications*, and knowing the danger which a person is exposed who uses an article of medicine that he knows not the nature of, and having seen from time to time the injurious effect of these articles, I now candidly say to the public, '*Be particular, as you value your lives and health*, to avoid all nostrums and patent medicines, of which you know not the nature nor composition.' And the practicing physician who uses or recommends to his patients these articles, only indirectly acknowledges that he has no confidence in his own preparations of medicine, and his ignorance of the HEALING ART."

CHAPTER XVIII.

THE PASSIONS.

SUCH is the connection between the body and the mind, that one cannot be affected without a correspondent or sympathetic affection of the other. But how this union of matter and mind exists, this material, and immaterial connection, is a subject of profound astonishment, which must ever remain a mystery to the greatest philosopher, or metaphysician. The most we know, is, that the nerves are the connecting medium between the soul and the body. Hence certain passions, or mental affections, have great influence over the system, and likewise whatever affects the body, must in like manner, affect the mind. It therefore becomes necessary to study the nature, causes and symptoms of mental derangement; but in this place, the passions, more especially, form the subject of inquiry. Those passions which are the most subject to derangement, or to an unreasonable and morbid excess, are *love*, *grief*, *fear*, and *anger*. To these we might add, *joy*, *envy*, *malice*, and *hatred*.

Love.

This passion may, with propriety, be divided into two species, or kinds: One, is a supreme attachment to the Creator; the other, to the creature.

1. *Love to the Creator.*—This constitutes the most noble, the most sublime, and the most heavenly of all the passions that actuate the human breast. That being whom the heaven of heavens cannot contain, is emphatically pronounced, *Love*. From which we may infer that this is the most holy, and blissful attribute of *Deity*, and the only true source of happiness to men and angels.

The exercise of this passion, constitutes a *Heaven*, while its opposite passion, anger, constitutes *Hell*, and the sufferings of the damned. There is therefore no passion which exercises such a healthful, and important influence as pure, celestial love.[†] It is a fact, which has been confirmed by thousands, that the most inveterate and dangerous diseases, such as baffled the skill of physicians, have been removed by the influence of that love which has followed the pardon of sin. While *Anger* on the other hand, has brought on fatal and incurable diseases. There is therefore the highest incentive for us both, in a temporal and spiritual point of view, to be brought under the influence of this love.

2. *Love of the Creature, or Carnal Love.*—The love of the Creator, just spoken of, begets a correspondent love to all mankind; not a carnal or selfish love, but a pure, disinterested affection, emanating from a divine influence, and so far as it is exercised, is noble, praiseworthy, and highly beneficial to society. But there is another kind of love which admits of two species, and both of which are very different in their effects.

1. *Selfish Love*.—This consists in a supreme regard to ourselves, and those only through whom we derive some personal benefit. This originates from low and sordid principles, and is one great cause of the misery in the world.

2. *Carnal Love*.—I now come to speak of that kind of love to which authors who write upon this passion, invariably allude. They make no distinction between the several kinds of this passion, but treat of it as emanating from one source. Whereas it appears evident to me, that the most clear distinction should be observed. There appears to be as much difference between *disinterested*, and *carnal love*, as there is between any two diverse, or opposite passions. A person becomes attached to a female which he considers *love*, and in the commencement, it may be *disinterested love*. But the next sensation is a *carnal passion*, which is associated with lust. When this is the case, it certainly, in my opinion, ceases to be genuine love; but how far this latter passion is consistent with the highest and best principle of love, or whether it is permitted in divine wisdom expressly to procreate the human species, I shall not attempt to decide. But I have seen so much misery result through mistaken notions of this passion, by reason of substituting carnal for disinterested *love*, that I wish to draw a clear distinction between the two kinds. It is a question in the minds of many, how far the fall of man from his primeval state of simplicity, has deranged this passion, and introduced selfish and carnal love. But it does appear that Deity, on account of the first transgression, permits the present state of things, for wise purposes; however much it may differ from his original design.

There is one thing, however, to which I wish to call the attention of the reader, and which points out and seems to show an irreconcilable difference between the two kinds of love, viz. *disinterested* and *sensual*. I allude to the testimony and experience of some of the best men, who have lived in any age of the world. They state, that the two, proceed from sources entirely opposite; that when spiritual and disinterested love pervades the soul, *carnal love* is entirely overpowered, destroyed, and *vice versa*.

It may not be improper here to state, while writing upon the passion of love, according to the common acceptation of the term, that its influence, and effect upon the mind, is in every case, very insidious and gradual; that the subject of it, from a state of indifference, slowly, and imperceptibly, is brought under its influence, until it becomes fairly seated in the mind; when this is the case, it may be ranked among the strongest passions, and when it is disappointed in its object, it becomes a disease, and a subject of medical attendance. Every person should be well conversant with this fact, who is desirous of "avoiding *entangling* affections." The passion of love is produced on the principle of association, which begets assimilation or attachment, from which every one may learn the prevention, if not the remedy. There is one remarkable fact respecting this passion, which I shall here mention, and it is that love creates the most irresistible and powerful impression between the ages of twelve and sixteen; a truth which shows the necessity of pointing out proper remedies.

Symptoms.—The symptoms of love when it creates disease, are well known. Melancholy; love of solitude; sighing; wakefulness, &c. It sometimes has a great influence upon the system, such as dyspepsia; hysterica; hypocondriasis; fever and mental derangement, the latter of which, has sometimes ended in suicide; while the others have occasionally terminated fatally.

It is remarkable that those who have been cured of any of the diseases from love, particularly by medicines, recover without possessing any affections for the persons whom they formerly loved. It is stated that this was the case with one of the princes of Conde. He said that his physicians had drawn off all his love for his mistress, by their remedies.

Treatment. Avoid the Company of the Object.—When a cure is desired for love, an opposite course must be taken from that which caused it. Association first begat assimilation as stated above: it now becomes necessary in order to cure it, to pursue an opposite course, and keep from the company of the object beloved. By seeing the person often, it only adds fuel to the fire. A voyage, or journey should be undertaken, for absence has been justly styled “the tomb of love.”

Medicine.—If the passion has become so seated, as to create any specific disease, appropriate remedies must be prescribed. These should be adapted to particular symptoms. The stomach must be cleansed, the bowels regulated, and a restorative course of treatment pursued.

Divide the Affections.—Let the person labouring under this passion, and who wishes to be cured of it, mix in cheerful company, and let him or her select from the multitude, another object, whose attractions shall engage the attention; by this means, the affections become divided between the two objects, and the passions become weakened or entirely destroyed. Ovid speaks of this, and compares it to a river or stream which has dried up after it has become divided.

Recreation and Rural Scenery.—Recreation and rural scenery, will contribute very much to the destruction of this passion. Let the person travel, and behold the beauties of nature. Let the flower garden be cultivated. Let cheerful and amusing books of a moral tendency be perused.

Indignation.—I wish to suggest or recommend nothing inconsistent with morality or religion, or any thing calculated to excite any of the passions. But in a medical point of view, I trust I shall be excused, if I recommend one passion less violent, more transient, and less injurious in its effects, for the purpose of removing another. I therefore would recommend the indulgence of a suitable degree of spirit and indignation against the object loved, sufficient, at least to remove the *inordinate degree* of the passion, not however, to the exclusion of friendship and benevolence.

In accordance with this, I would advise the person labouring under this passion, to indulge the opposite passion, viz. hatred or indignation. Let his or her ill treatment, deformities, and defects be constantly brought to mind, and in this way, victory may be obtained. Many have been perfectly cured by this alone.

Let the person under the influence of this passion, exercise fortitude and resolution. Let him spurn the thought of being injured by becoming a dupe to this puerile, slavish and transient passion, which subsides as soon as the object is possessed, and which is often followed by indifference and even disgust, wrangling, quarrelling, care, burden, perplexity, to which "single blessedness" is a stranger, to say nothing of the grief and sorrow entailed by a numerous, and perhaps wicked offspring. Think of the troubles from which you will be exempted, by living in a single state, and enjoying the company of your friends, without your affections being so divided as to render their company irksome.

Morality and Religion.—Let morality and religion, be another incentive to you, to banish this passion for the creature, and to place your affections upon your Creator. Think how much better you can serve Him, divested of the cares of a family. Think of the fact that is so much complained of by Christians, that as soon as they get married, their cares and affections are such, that they appear to lose all love for their Creator.

Let Hope in the Lover be Extinguished.—A celebrated writer has the following pertinent remarks upon this passion: "As hope and love are born together, so they can only die together." Uncommon pains therefore should be taken, in curing love, to extinguish every spark of hope in a lover. This advice is given with singular good sense and humanity, by Dr. Gregory, in his legacy to his daughters, upon the subject of courtship and marriage.

Grief.

Few, if any, of the passions are more severe, or more injurious, than grief. Fear and anger, though more violent, are of shorter duration. Grief consumes slowly, and undermines the constitution, and is much more permanent in its effects than most any of the passions; and where it is very deeply seated, sometimes proves fatal.

Symptoms.—The symptoms of grief are languid circulation; contraction of the heart; slow, weak, and unequal pulse; paleness; fretfulness; loss of sleep and appetite; flatulence and dyspepsia. In females, it is sometimes accompanied with suppressed menstruation; indeed all the functions of the body become impaired by the indulgence of this passion, and such is the effect on the mind, that the subject of it cannot enjoy health.

A very sudden and powerful attack of grief, causes hysteric and apoplectic fits, and sometimes it ends in loss of memory, marks of premature old age, melancholy, and insanity.

Dissections of those who have died of grief, discover congestion in, and inflammation of the heart, with a rupture of its auricles and ventricles.

Grief produces contraction of the womb, miscarriage, &c. it destroys the circulation of the fœtus; produces a relaxation of the muscles of the spineter, and of the bladder.

There is another peculiar symptom of grief, not generally noticed, which is that of profound sleep; a mother who has just lost a child, often sleeps profoundly. The keeper of Newgate in London states, that

criminals sleep soundly the night before their execution. The son of general Custine in Paris, slept nine hours the night before he was led to the guillotine. The disciples of our Saviour slept during his agony in the garden, in consequence of "sorrow having filled their hearts."

Treatment. Anodynes.—When grief seizes a person suddenly and powerfully, very much shocking the system, an opium pill may be administered. Should paroxysms or urgent symptoms occur, it may be repeated.

Purgatives.—Should grief so prey upon the system, as to create great excitement, a purgative may be administered. While it lessens the excitement, it will also obviate costiveness, a very attendant symptom upon this passion.

Silence.—Conversing much with persons labouring under this passion, often exasperates it. Silence is better than much conversation.

"There is science," says a writer, as well as sympathy, in this silence, for in this way, grief most rapidly passes from the bosom of the sufferer into that of his friend.

Solitude.—Grief is generally increased by solitude. When a person is afflicted with grief, he feels much more distressed when he is alone, no doubt by dwelling on the cause of it. Solitude should, therefore, by all means be avoided.

Friends.—A person seized with grief, almost invariably flies to his or her nearest friend, to unbosom and unload the mind of its sorrows. Such a friend, if he is one indeed, receives a portion of the sufferings, which immediately lessens the affliction. Therefore the company of friends should be resorted to.

Religion.—The greatest consolation, is no doubt derived from religion. The sufferer should remember well, that afflictions arise not from the dust, that every event is permitted by Divine Providence, and under his superintendence, and that his afflictions or bereavements has been wisely dispensed, even for his or her individual benefit, however heart-rending the present trial may be. We should recollect that the Creator deals out afflictions, and trials to the children of men, *with the same scrupulous exactness, as the apothecary or physician deals out his medicines.*

Change of Scenery.—The mind in distress, may be much relieved by a change of scenery. Let there be a constant succession of new ideas, and new objects to divert the attention. Travelling, sailing, the study of any art or science, reading or writing on interesting subjects, &c. will sooner assuage grief, than many other amusements. When the mind has nothing else to think about, but its misfortunes and calamities, it is sure to indulge in grief. Some business, therefore, should be rigidly followed.

Persons suffering under any misfortune, should carefully abstain from the use of ardent liquors, as they are apt to fly to it for relief, and thus become intemperate.

In communicating sad tidings, it never should be done all at once, but gradually, that the mind may be prepared for it.

Anger.

This passion exerts a most violent and powerful effect on the system. When it ascends to rage and fury, or when it is protracted into malice and revenge, it becomes a sin and proves very destructive to health.

Symptoms.—A paroxysm of anger produces a determination of blood to the brain; fulness of the blood vessels of the face; redness of the eyes; foaming at the mouth; volubility or total suppression of speech; agitation of the fists; stamping of the feet; and uncommon bodily strength. It sometimes causes hysteria, hemorrhage, and mania. It affects the sanguiferous and nervous system, produces vomiting, and often breaks a blood vessel, or brings on apoplexy. It causes a return of epilepsy; bleeding at the nose; affects the secretions of the liver; induces colic, diarrhoea, faintings, and convulsions.

Treatment.—The remedies for anger, when it becomes a disease, may be divided into two classes. First, Such as are proper during its paroxysms. Second, Such as are proper, during their intervals, to prevent a recurrence.

1. *During a paroxysm.*—Let a person labouring under this passion, drink a tumbler of cold water. It gives time for the rage to subside, and also gives time for reflection. Cold water thrown over the whole body, has cured a paroxysm of anger. It never fails to part two contending fowls, or dogs.

Resolution.—Let the whole powers of the mind be concentrated instantaneously to form a resolution not to indulge in the passion of anger. This is the most powerful of every other means to suppress it.

Absence from the exciting cause.—As soon as a person is attacked with a paroxysm of anger, let him immediately absent himself from the exciting cause of it, except there is a strong probability of a reconciliation by seeing the person who has occasioned it. When this is the case, be resolved to meet the person with as much calmness as possible, and let the subject be conversed upon. In such cases the difficulty is often settled, and a greater friendship follows.

2. *Means of preventing a recurrence of Anger.*—Those who are very passionate, should avoid all stimulating drinks and liquids, as nothing tends more to inflame the passion of anger, than these. It is owing to this that even friends, when they assemble together and drink ardent spirits, often begin to wrangle, quarrel, or fight. Dr. Arbuthnot states that a milk and vegetable diet has cured a very angry disposition.

Silence.—Whenever a person becomes very angry, let him be silent, and do, nor say nothing to fan the flame of anger.

Science or Education.—These have a great tendency to eradicate from the breast the baneful passion of anger. They teach the mind that there is true wisdom and philosophy, in abstaining from the indulgence of such an unholy and pernicious practice.

Opinion of others.—Those that are subject to fits of anger, should recollect in their calmer moments of reflection, that when they exhibit a paroxysm of anger, they render themselves as ridiculous as a drunken man.

“It will be useful for persons subject to the criminal degrees of this

passion," says Dr. Rush, "to reflect, that it is not only contrary to religion and morals, but to liberal manners. The term gentleman implies a command of this passion above all others."

Religion.—There is nothing so powerful to allay the tumults of this mighty passion, as religion. It is this alone that seems fully capable of eradicating it from the human breast. It is remarkable that real Christians have been incapable of showing the least anger under the most aggravating circumstances. Therefore, whoever labours under this besetting sin, should pray earnestly to God for its removal.

Medicine.—When anger causes bilious and hepatic diseases, appropriate medicines must be administered, which will be hereafter mentioned.

Fear.

Fear, which was no doubt implanted by the Creator for a wise purpose, exerts a great influence over the animal economy. Fear and anxiety, by depressing the spirits, not only dispose us to diseases, but have a tendency to aggravate them, or even render them fatal.

Symptoms.—The effects of fear, when it acts suddenly upon the system, are tremors, quick pulse and respiration, globus hystericus, a discharge of urine, diarrhoea, and sometimes an involuntary discharge of the fæces, fever, convulsions, fainting, madness, and death. Dr. Brambilla relates the case of a soldier, in whom fear produced not only a fever, but a mortification from a blister on the leg, which destroyed his life. Besides these general effects of fear, it acts in a peculiar manner upon the hair of the head. First, in causing it to stand perpendicular. This has been described by Virgil and Shakspeare. Second, in converting it suddenly to a gray, or white colour; and Third, in causing it to come out by the roots, and to fall off the head. Of this Dr. Huch states that he knew an instance of a gentleman who was in Lisbon, at the time of the great earthquake in 1755.

Other effects of fear have been lately noticed. The earthquake which took place on the shores of the Mississippi, in December, 1811, produced silence or great talkativeness, and moping stillness or constant motion in different people.

Treatment.—Although fear appears to be in a considerable degree constitutional, yet it may be moderated, or measurably overcome by habit, the exercise of reason, philosophy, and religion.

Those very subject to this passion, should endeavour to exercise fortitude of mind. They should reflect that they have no just grounds or reason to fear any thing which can happen unto them, provided they are in the line of their duty, and act conscientiously. That nothing will be permitted to overtake them, but such as is for their benefit. In a word, they should endeavour to exercise perfect resignation, ever bearing in mind the following lines of the poet:

"Through all the downward tracts of time
God's watchful eye surveys;
O, who, so wise to choose our lot.
Or regulate our ways.

I cannot doubt his bounteous love,
Unmeasurably kind;
'To his unerring, gracious will,
Be every wish resigned.

Good when he gives, supremely good,
Nor less when he denies;
Even suff'rings from his sov'reign hand,
Are blessings in disguise.

Here happiness cannot be found,
The honey 's mixed with gall,
'Midst changing scenes and dying friends,
Be thou my all in all.

Fear of Thunder and Lightning.—Dr. Rush has the following judicious remarks upon the prevention of fear in thunder storms:

“ The remedies for it are,

1. Living in a house defended by a lightning rod.
2. Sitting in the middle of a room, and remote from the doors and windows of a house, not defended by a lightning rod.

3. A citizen of Philadelphia, who was under the influence of this fear, obviated it in a degree by closing the doors and windows of a room, and sitting with a lighted candle in it. By this means he avoided the sight of the lightning, and the anticipation of the noise of the thunder which usually follows it.

4. A lady of respectable character, formerly of this city, usually fainted with terror during the time of a thunder-gust, and discovered, by a livid countenance, and cold and clammy sweats, the signs of approaching death. She was apparently kept alive, by pouring into her stomach three or four wine glasses of Jamaica spirits: it was remarkable she never was intoxicated by it, and that it was disagreeable to her at all other times.

5. I crossed the Atlantic Ocean with a lady, in whom an acute headache was always induced by thunder. It left her as soon as the thunder ceased. Her only remedies for it, were quietness and silence. It is probable a large dose of laudanum, taken upon the appearance of a thunder-gust, would have prevented this head-ache, as well as obviated the terror mentioned in the two preceding cases, more effectually than a close room artificially lighted, or a large quantity of ardent spirits.

2. The fear which is excited by darkness may easily be overcome by a proper mode of education in early life. It consists in compelling children to go to bed without a candle, or without permitting company to remain with them until they fall asleep.

3. The fear of ghosts should be prevented or subdued in early life, by teaching children the absurdity and falsehood of all the stories that are fabricated by nurses upon that subject.

4. The fear from speaking in public was always obviated by Dr. John Hunter, by taking a dose of laudanum before he met his class every day.

5. The fear from sailing, riding, and from certain animals and insects, may all be cured by resolution. It should be counteracted in early life. The existence of it always shows a defective education. Peter the Great, of Moscovy, was born with a dread of water. He

cured it, by throwing himself headlong into a boat when obliged to cross a river. The horror he felt in doing this often induced syncope. He finally conquered his dread of water, so as to cross seas in pursuit of the great objects which characterized his life and reign.

In cases of sudden fear from any cause, holding the breath, coughing, or hawking, often give immediate relief. They impart tone to the brain, by promoting a determination of blood to it, and thus infuse vigor into the mind.

To obviate fear from all its causes, great advantages will arise from creating counter motives in the mind. The fear of death in a battle is overcome by the powerful sense of glory, or shame. The fear of the pain of an operation, such as drawing a tooth in a child, is overcome by the expectation of receiving afterwards a piece of money, and the prospect of all the pleasures it will procure.

Great advantages may likewise be derived for the cure of fear, by a proper application of the principle of association. A horse will seldom be moved by the firing of a gun, or the beating of a drum, if he hear them for the first time while he is eating; nor will he start, or retire from a wheel-barrow, or a millstone, or any other object of that kind, after being once or twice fed upon them. The same law of association may be applied in a variety of instances to the human mind, as well to the prevention, as cure of fear.

Of Joy.

"This emotion," says Dr. Rush, "is attended sometimes with pain in the region of the heart, a change in the voice, tears, syncope, and death. Mr. Bruce mentions another symptom of excessive joy, and that is thirst, which he felt in a high degree, when he reached the long sought for head of the Nile. He gratified it, he tells us, by drinking the health of his sovereign, George the Third, and of his mistress, by a draught from the fountain of that celebrated river.

Joy is most intense, when it has been preceded by fear. The Indian Chief, Logan, has designated this form of joy in his eloquent speech, preserved by Mr. Jefferson, in his Notes upon Virginia, when he declares that "he knew not the joy of fear."

There are many instances upon record, of death being induced by a sudden paroxysm of joy. The son of the famous Leibnitz died from this cause, upon his opening an old chest, and unexpectedly finding in it a large quantity of gold. Joy, from the successful issue of political schemes or wishes, has often produced the same effect. Pope Leo the Tenth died of joy, in consequence of hearing of a great calamity that had befallen the French nation. Several persons died from the same cause, Mr. Hume tells us, upon witnessing the restoration of Charles the Second to the British throne; and it is well known the door-keeper of Congress died of an apoplexy, from joy, upon hearing the news of the capture of lord Cornwallis and his army, during the American revolutionary war.

During a paroxysm of joy, if it be attended with danger to life, a new emotion or passion should be excited, particularly terror, anger, fear, or grief. Perhaps the effusion of cold water might have that effect.

The stimulus of artificial pain should likewise be tried. It should be of a nature calculated to produce the most prompt effects.

The morbid state of joy should be prevented, by imparting the news which we expect will create it, in a gradual manner, and with the alloy of some unpleasant circumstances,

Connected with joy, but produced by different causes, is LAUGHTER. It is a convulsive disease, and sometimes induces a rupture of a blood-vessel, in the lungs, spleen, or brain. I have seen an instance of hæmoptysis induced by it, which had a fatal issue. Two sudden deaths are upon record from it, the one of Chrysippus, an ancient Greek philosopher, the other of a pope. It was induced in the latter, while he was confined to his bed with a light indisposition, by seeing a tame monkey put on a part of his pontifical robes. Excessive laughter, when not attended with these fatal effects, is often followed with a pain in the left side, hiccup, and low spirits.

The remedies for a paroxysm of laughter should be fear, terror, or any other counter impression. Pinching the body, or the affusion of cold water over it, is calculated to produce the same good effects. Laudanum seldom fails of relieving the pain, hiccup, and low spirits, which sometimes follow it."

Of the Morbid Effects of Envy, Malice, and Hatred.

BY DR. RUSH.

"As envy is commonly the parent of malice and hatred, I shall make a few remarks upon it, and afterwards mention the combined effects of them all upon the body.

Of this vice it may be truly asserted, that it is deep seated, and always painful; hence it has been said, by an inspired writer, to resemble "rotteness in the bones;" and by lord Bacon, "to know no holidays." It is likewise a monopolizing vice. Alexander envied his successful generals, and Garrick was hostile to all the popular players of his day. It is moreover a parricidal vice, for it not only emits its poison against its friends, but against the persons, who, by the favours it has conferred upon those who cherish it, have become in one respect the authors of their being; and, lastly, it possesses a polypus life. No kindness, gentleness, or generosity, can destroy it. On the contrary, it derives fresh strength from every act which it experienced of any of them. It likewise survives and often forgives the resentment it sometimes occasions, but without ceasing to hate the talents, virtues, or personal endowments, by which it was originally excited. Nor is it satiated by the apparent extinction of them in death. This is obvious, from its so frequently opening the sanctuary of the grave, and robbing the possessors of those qualities of the slender remains it had left them of posthumous fame.

However devoid this vice and its offspring may be of remissions, they now and then appear in the form of paroxysms, which discover themselves in tremors, paleness, and a suffusion of the face with red blood. The face in this case performs the vicarious office which has lately been ascribed to the spleen. But their effects appear more frequently in slow fevers, and in a long train of nervous diseases. Persons affected with them seldom acknowledge their true cause. A single instance only of

this candour is mentioned by Dr. Tissot. He tells us he was once consulted by a gentleman, who told him all his complaints were brought on by his intense and habitual hatred of an enemy. Many of the chronic diseases of high life, and professional men, I have no doubt, are induced by the same cause.

I once thought that medicine had not a single remedy in all its stores, that could subdue, or even palliate the diseases induced by the baneful passions that have been described, and that an antidote to them was to be found only in religion; but I have since recollected one, and heard of another physical remedy, that will at least palliate them. The first is, frequent convivial society between persons who are hostile to each other. It never fails to soften resentments, and sometimes to produce reconciliation, and friendship. The reader will be surprised, when I add, that the second physical remedy was suggested by a madman in the Pennsylvania Hospital. In conversing with him, he produced a large collection of papers, which he said contained his Journal. "Here (said he) I write down every thing that passes in my mind, and particularly malice and revenge. In recording the latter, I feel my mind emptied of something disagreeable to it, just as a vomit empties the stomach of bile. When I look at what I have written a day or two afterwards, I feel ashamed and disgusted with it, and wish to throw it into the fire." I have no doubt of the utility of this remedy for envy, malice, and hatred, from its salutary effects in a similar case. A gentleman in this city informed me, that after writing an attack for the press upon a person who had offended him, he was so struck with its malignity, upon reading it, that he instantly destroyed it. The French nobility sometimes cover the walls and ceiling of a room in their houses with looking glasses. The room, thus furnished, is called a boudoir. Did ill-natured people imitate the practice of the madman and the gentleman I have mentioned, by putting their envious, malicious, and revengeful thoughts upon paper, it would form a mirror, that would serve the same purpose of pointing out, and remedying, the evil dispositions of the mind, that the boudoirs in France serves, in discovering and remedying the defects in the attitudes and dress of the body.

To persons who are not ashamed, nor disgusted, with the first sight of their malevolent effusions upon paper, the same advice may be given, that Dr. Franklin gave to a gentleman, who read part of a humorous satire which he had written upon the person and character of a respectable citizen of Philadelphia. After he had finished reading it, he asked the Doctor what he thought of his publishing it. "Keep it by you," said the Doctor, "for one year, and then ask me that question." The gentleman felt the force of this answer, and went immediately to the printer, who had composed the first page of it, took it from him, and consigned the whole manuscript to oblivion.

I shall conclude the history of the passions, by remarking, that their symptoms, and force, are varied by a difference in predisposition, age, rank in society, profession, moral and religious habits, duration, and by their acting singly, or in combination with each other.

There is now and then a *torpor of the passions*, the reverse of the diseases in them which have been described. Instead of being unduly

excited, they are devoid of all sensibility and irritability. Persons who are thus affected love and fear nothing. They are strangers to grief and anger; they envy and hate nobody; and they are alike insensible to mental pleasure and pain. I was once consulted by a citizen of Philadelphia, who was remarkable for his strong affection for his wife and children when his mind was in a sound state, who was occasionally afflicted with this apathy, and when under its influence lost his affection for them all, so entirely, that he said he could see them butchered before his eyes without feeling any distress, or even an inclination to rise from his chair to protect them.

This paralytic state of all the passions continues during life in some people: a physician of great eminence, who died some years ago in England, declared, upon his death bed, that he had never known what it was to love man, woman, or child. But we sometimes meet with this *disorder* in a partial state. Thus there are men who have never loved, others who have never feared, others who have never shed a tear, and others in whom injuries have never excited an emotion of anger. In such persons, the mind is in a mutilated state; for man, without all his passions, is an imperfect being, both as to his duties and happiness.

The remedies for this torpid state of the passions, whether general or partial, should be suited to the state of the system. Purgatives will be proper, if the blood-vessels are oppressed. In a contrary state of the system, powerful stimulants, particularly pain, labour, and the cold bath, are indicated."

In conclusion, I have to observe that the due regulation of the passions, contributes much to health and longevity. The animating passions, such as joy, hope, love, &c. when kept within proper bounds, gently excite the nervous influence, promote an equable circulation, and are highly conducive to health; while the depressing affections, such as fear, grief, and despair, produce the contrary effect, and lay the foundation of the most formidable diseases.

CHAPTER XVIII.

RULES FOR THE PREVENTION OF INFECTIOUS DISEASES, AND CONTAGION.

It is no doubt the case, that very many infectious or contagious diseases, may be averted or completely destroyed by adopting proper means for this purpose.

Separation or Removal.

When any person is attacked with a disease which is contagious or supposed to be contagious, he should be immediately removed to a place established expressly for that purpose, or if convenient, or desirable, let him be taken to a separate and remote part of the house, distant from the rest of the family, into a clear and well ventilated room. The upper portion of the house is preferable. First, Because it is drier; and Second, Because it permits the contagious effluvia arising from the body of a patient, more readily to pass off, as the current of air more rarified is naturally upwards.

Separate Apartment for the Sick.

In all boarding houses, and where a great number of persons are crowded together, there ought to be a separate room for those that are sick. Where there is not a suitable place, one should be provided in the vicinity or neighbourhood.

Intercourse with the Sick.

There should be as little intercourse with the person affected with any contagious disease, as possible. No one should be allowed to visit him, except the nurse, or immediate relatives, and those should be careful to keep at a proper distance from the bed; that his breath, and the vapour arising from his body may not be inhaled.—A handkerchief wet in vinegar, may be held occasionally to the nose while in the room. Those who are obliged to continue in the room, should, as much as possible, avoid fatigue, be very temperate, and occasionally take a dose of physic.

Let them eat plenty of raw onions, and let them be applied to the feet of the sick person, and other parts of the body.

It is generally admitted that fear operates as a predisposing cause in the production of infectious diseases. It therefore becomes necessary to command as much fortitude and resolution as possible, as well as to inspire confidence in the mind of the patient.

Ventilation.

The greatest attention should be paid to a free, and constant circulation of air in the apartment or apartments. The upper part of the

window or the door should be left open—but a current of air direct upon the person, should be avoided. If the weather should be very windy, let muslin or gauze be hung before the window. Nothing is more important than pure air.

Cleanliness.

Great attention should also be paid to cleanliness. The clothes of the sick, must be often changed, and the room kept perfectly clean. Haygarth lays down the following rules to prevent the spread of infectious diseases :

1. "The chamber in which the patient lies, must be kept clean and freely ventilated. No bed curtains must be allowed to be drawn around the patient."

2. "Dirty cloths, utensils, &c. should be often changed, and immediately immersed in cold water ; and washed clean when taken out."

3. "The discharges from the patient must be instantly removed ; and the floor around the patient should be rubbed clean once a day with a wet cloth."

4. "Avoid the current of the patient's breath, as well as the effluvia which ascends from his body, and from the evacuations."

5. "Visitors ought not to go into the patient's chamber with an empty stomach ; and in doubtful circumstances, on coming out, they should blow from the nose and spit from the mouth any contagious poison which may adhere to these passages."

Fumigations.

In order to remove any offensive or disagreeable effluvia, and to destroy the power of contagion engendered, fumigations may be used. The following:—Take a suitable quantity of common oil, put it into an earthen vessel of any kind, and add sufficient sulphuric acid, or oil of vitriol, to moisten it. A purifying gas will be disengaged and diffused through the room. This is sufficient for small apartments ; but for hospitals, the vessel may be placed over a moderate degree of heat. Clothes may be submitted to this gas, and other places that are foul and suspected of contagion.

Another excellent method to purify rooms where there is contagion, is to pour vinegar on a heated shovel, or peal. This should be frequently done, and particularly when any thing passes the bowels of the sick person. Green plants may also be kept in the apartment, and the fumes of bitter herbs, bruised or boiled, are also excellent preventives. The hands, face, and body, should be occasionally bathed with vinegar, and the temperature of the body should not be too great, as it tends to putrefaction. Whatever diet is given, should be of an antiseptic nature, nutritious. and altogether vegetable.

Sweet Oil a Preventive.

For the prevention of the plague, it has been recommended to bathe the body with sweet oil, as it has been ascertained that among a million of inhabitants carried off by the plague in Egypt, not a single oil-man, or those who worked in oil stores, were ever infected

with the disease; their clothes and bodies were besmeared with oil. I therefore recommend any one exposed to any contagious disease, to dip their flannels in sweet oil, wring them out, and constantly wear them in this state, thus saturated with the oil; also take an ounce of the oil once or twice a week, and observe universal temperance.

Fever Institutions.

These are of great consequence, and ought to be established near every large town and city, being the most likely to prevent the spreading of contagious diseases, under proper regulations, with proper medical attendance and nursing.

Rigid Quarantine.

It becomes necessary for our municipal authorities, to pay no regard to the disputed points of contagion and non-contagion; but to maintain a rigid quarantine upon all vessels coming from those parts, where contagious diseases are from time to time prevalent.

Secret of Destroying Contagion.

The great secret of destroying contagion, and preventing its increase, is unquestionably to *dilute the infected air, or atmosphere*, by ventilation, cleanliness, fumigation, separation of the sick, or those suspected. There is every reason to believe that this will not only prevent the spread of contagion, but entirely destroy the powers of it.

Chloride of Lime.

In conclusion, I have to state that the chloride of lime possesses very antiseptic, disinfecting, and purifying properties, which render it highly important in the preservation of health, and prevention of contagion, by decomposing putrid effluvia of every kind, and preventing the generation of epidemic diseases, or arresting their progress when they already exist. It destroys the poisonous exhalations from privies, sewers, docks or ponds, left bare at low water; also of vaults, cellars, store-houses, hospitals, prisons, market-houses, gutters, &c. It is valuable for purifying the air of wells, mines, slaughter-houses, drains, tables, the holds of vessels, and the rooms of the sick. It prevents the fetid smell from dead bodies previous to burial, and such as are disinterred for judicial investigation; also the fetid effluvia from dirty clothes.

Chloride of lime immediately destroys the offensive smell from any source.

Method of using it.—The method of using it is very simple. A little of it may be placed in a saucepan, and kept in any place where there is contagion, or any disagreeable effluvia whatever; or, the apartments may be sprinkled with the article. The fetid smell which arises from the excrements of the sick, or any other exhalation, is immediately destroyed by sprinkling a small quantity in the room. As a means of removing the sources of disease in cities and villages, chloride of lime demands the attention of the guardians of the public health.

CHAPTER XX.

I SHALL conclude the different Chapters on Health and Longevity, by introducing one or two anecdotes:

A very aged man was called into court as an evidence. The judge being struck with the advanced age of the witness, asked him how he had lived to be such an old man—he replied in the following language :

“Wine and women I always refused.
Late hours I never used.
I kept my head and feet from cold,
And that is the reason I am so old.”

BOERHAAVE.

This celebrated physician and scholar ordered in his will that all his books and manuscripts should be burnt, one large volume with silver clasps excepted. The physical people flocked to Leyden, entreating his executors to destroy his will. The effects were sold. A German count, convinced that the great gilt book contained the whole arcanum of physic, bought it for ten thousand guilders. It was all blank but the first page, on which was written, “Keep the HEAD cool, the FEET warm, and the BODY open, and then bid defiance to the physician.”



PART SECOND.

GENERAL PRINCIPLES OF THE AMERICAN PRACTICE OF MEDICINE, AND INDICATIONS OF CURE.

There must be first principles in medicine, as well as in philosophy, which are invariable and incontestible, and which, like the stars of the firmament in guiding the mariner, will conduct the physician, with assured aim, through the different stages of disease.



PART SECOND.

GENERAL PRINCIPLES OF THE AMERICAN PRACTICE OF MEDICINE, AND INDICATIONS OF CURE

"PRINCIPLES NOT RECIPES."

CHAPTER I.

NATURE, CAUSES, AND TREATMENT OF DISEASES IN GENERAL.

SECTION I.

THE pathology or doctrine of diseases in general, has been a subject of controversy in all ages of the world. A thousand different causes have been assigned for disease, and as many different modes of cure. Nor is the question at this day settled, or any better understood. We shall not here take up time, or discuss this subject to refute either the ancient, or modern doctrines maintained, any farther than we conceive they interfere with correct medical practice.

Theory and speculation are harmless, while they do not lead to any pernicious course of treatment. But when they lead to erroneous practice, it becomes necessary to refute them.

We shall now inquire into the pathology of disease, and lay down such principles as will lead to a judicious mode of treatment. In prosecuting this inquiry, no elaborate researches are deemed necessary. We have only to follow the simple path of truth, or in other words, to follow the voice of reason and nature.

The Excretions the only outlets of Disease.

The Author of our existence, has wisely established certain laws in the animal economy, to guard and protect it against the inroads of disease, and when formed, to remove it. By these laws we understand an inherent power of the system to throw off any, and every thing which is foreign, or injurious. Let us now inquire in what manner this is performed. A little attention to the system, shows us that there are certain outlets, or excretions to the system, designed especially to carry off every thing retained which is incompatible with health. When these excretions perform their offices, a person may be said to be well; but

when they cease to act, or act imperfectly, morbid matter is retained, and derangement follows.

I shall here briefly treat upon these several excretions, show their offices, and the consequences arising from their obstruction.

1. *The Skin.*

The whole body is covered, and lined with this membrane, through which there are innumerable pores or openings destined to carry off every thing which is not salutary, or compatible with a healthy state of the system. The fluid which thus passes off, is distinguished into sensible and insensible perspiration. By looking at any part of the body in the summer season, with a microscope, vapour or steam may be seen to rise like a fountain, which, coming in contact with the atmosphere, becomes condensed, and falls down in the form of drops which we term sweat or perspiration. When this is kept up, and continued, the blood is pure, being separated in this manner from every impurity. But when this perspiration becomes checked by cold, the humours engendered in the system, are retained, carried into the circulation, settle upon some organ, that is most predisposed to disease, and become a source of irritation. Every day's observation, convinces us that the moment the pores become in any degree closed, a universal derangement succeeds. A sensation is felt in that part where such retained perspirable matter is thrown, as if a needle, or some foreign substance was piercing it. This, may be said to be the proximate cause of irritation.

It may be translated to the lungs, brain, kidneys, and other organs, causing inflammation, and pain; or it may remain in the blood, and cause fever. This fact is demonstrated by the phenomena of eruptive disease, small-pox, measles, &c. The infection or contagion is taken into the blood through the medium of the lungs, and as soon as it becomes sufficiently impregnated with the specific humour or virus, nature is aroused, and makes a powerful effort or struggle to expel it from the system. As soon as she accomplishes this object, the poison in these eruptive complaints is thrown copiously to the surface, and appears in the form of vesicles or eruptions, and when they are thus expelled, the fever immediately subsides, but will reappear if from debility, or other causes, the poison or humours are absorbed. It is the case also in hectic fever as almost every one knows. Matter from the lungs or an ulcer is taken into the circulation, and causes irritation and febrile excitement, and it is also proved from the termination of fever by sweat or perspiration, and also by fever sores. These facts reduce it to a mathematical precision, and renders the subject so simple and plain, that it is really a matter of profound astonishment that any one the least acquainted with fever, should be ignorant of its nature, cause and cure, as well as that of other diseases.

No doubt a preternatural accumulation of blood to such parts, may serve as an auxiliary source of irritation; but from various experiments it may be shown, that an accumulation of blood, alone, to any particular organ, is not sufficient to account for all the phenomena of disease; but this subject will be further illustrated in the next chapter. It is also

well known that fevers, inflammation and a variety of other complaints, immediately follow a check of perspiration.

Sanctorius proved that two-thirds of the fluids taken into the system are discharged by the skin, which shows the danger that must arise when such fluids are retained. Every person, the least acquainted with physiology must perceive that a departure from health must follow their obstruction.

2. *The Bowels or Intestines.*

The bowels or intestines are also designed by nature to carry off much that is noxious or injurious to the system, and which does not serve the purposes of health, or nutrition. Hence the diseases that arise from their long constipation. It cannot otherwise be, but that such a great quantity of extraneous and feculent matter lodged in the body, must disorder it. The effluvia arising from the operation of physic, is an evidence of the deleterious nature of retained alvine discharges.

Nature therefore expels disease very frequently by the intestines.

3. *The Kidneys.*

From the blood is secreted the urine through the medium of the kidneys, and which is another excretion designed to rid the system of something extraneous, foreign or morbid. When this excretion is checked, or if it does not duly perform its office, certain noxious matters are retained, and are mixed with the circulating fluid, and prove another source of morbid derangement, such as dropsy, inflammation of the kidneys, and how many other complaints, it is difficult to decide. That diseases are carried off by a copious discharge of urine, every physician knows. The effects which arise from the suppression of urine, points out the purpose for which it is designed.

4. *The Stomach.*

The stomach is another organ by which nature expels morbid agents. When violence has been done by overloading it, or when any thing poisonous or dangerous has been received, or when any contaminated fluid is poured into it, or when it becomes unhealthy or diseased from any cause whatever, the peristaltic or regular motion of it, is inverted, *vomiting* commences, and its contents are discharged, its tone restored, and health follows. Thus we see that this organ is designed to eliminate deleterious agents, and constitutes therefore an important excretion.

5. *The Lungs.*

The lungs are another organ which serve the purpose of secreting from the blood offensive agents. They not only throw off carbonic acid gas, but likewise mucus, and when they become diseased more especially, they cast off pus, which, if retained, would cause suffocation. Hence we see in pulmonary diseases, an effort of nature, to effect a cure, through the medium of this organ.

Inasmuch then, as health depends upon each and all of these performing their respective offices. it follows that when any one becomes tor-

pid, or ceases to perform its duties, that morbid excitement is the consequence; and this shows in a most striking light, the proximate cause of most diseases, at least; being nothing more or less than the retention in the system of morbid perspirable matter, producing irritation, morbid action and a deviation from health. These humours are no doubt taken into the system through the medium of the air, food, or drink.

Although the symptoms of complaints in general, are very different, yet this is not owing to the exciting cause; this being similar; but to the peculiar structure or the tissue of the organ which is the seat of the disease.

I have just seen a French work which corroborates these views. The author says, "if this fluid (meaning perspirable matter,) should be stopt, or considerably lessened, and thereby be transferred to any inward part, it must occasion some dangerous complaint. In fact, this is one of the most frequent causes of disease."

SECTION II.

OF THE EFFORTS OF NATURE TO REMOVE DISEASES.

MANY authors, particularly the ancients, wrote much on the powers of nature to remove diseases. It was usually called *vis mediatrix naturæ*, or a certain principle inherent in the system, to expel from it every thing injurious, foreign or extraneous. Some have denied that such an effort exists, while others admit it, and term it reaction, which may be considered an appropriate term. That it does exist, must be evident, to every person the least acquainted with the animal economy. A writer in England, by the name of Townsend, in his guide to health, has the following remarks upon this subject:

"The efforts of nature to relieve herself have, in all ages, exercised the attention of speculative minds. It is not my intention here to introduce the *Archæus* of Van Helmont to the student; but I shall state some facts, which will give him an idea of those efforts, which nature can exert for warding off approaching evil, for removing whatever disturbs her economy or functions, and for repairing any injury the system has received.

When cantharides, spread on a plaister, are applied to the surface of the body, they first excite a genial warmth with *inflammation* of the skin. A sense of burning follows, and nature distressed goes instantly to work, separates the cuticle to form a bag, interposes serum between the nerves and the offensive matter, then prepares another cuticle, that when the former with the adhering substance shall fall off, the nervous papillæ may be again provided with a covering.

If a grain of sand falls into the eye, tears flow in great abundance to float it off, that it may not mechanically injure that delicate and most irritable organ.

The same reasoning will apply to the operation of emetics and cathartics; for not only is the peristaltic motion, either greatly quickened

or inverted, according to the urgency of the distress, but both the mucous glands, and the exhalant arteries, pour forth their fluids in abundance, to wash away the matter that chemically, or even mechanically, offends.

When a thorn is lodged in some irritable part, the first suggestion of the mind is by the fingers, or by the assistance of the nails, to extract that thorn. But it is perhaps beyond our reach.

The design of nature, in the consequent *inflammation*, is to produce suppuration, and thereby to remove the thorn.

Should this effort be effectual, she next proceeds to the granulation of new flesh. The arteries and the veins, the lymphatics and the nerves, extend themselves, unite, and renew their communication, and, without the assistance of a surgeon, nature effects a cure.

Supposing her efforts to float off the offending matter, whatever it may be, should be insufficient after the suppuration is complete, she then proceeds to surround it with a wall; a hard and insensible callus is produced; or, in the language of surgery, a *fistula* is formed, and here, as I apprehend, her efforts cease.

In case of pleuritic *inflammation*, nature pours forth coagulating lymph, and, without the physician's aid, forms a new membrane, supplied, like the renovated flesh already mentioned, with arteries, veins, lymphatics, nerves, and thereby preserves the substance of the lungs from injury.

Van Swieten makes mention of cases in which calculi in the gall bladder, being too large for the common duct, had, after producing inflammation, adhesion, and suppuration, found their way by fistulous ulcers to the external surface of the body, and thus effected their escape. Comment. § 950.

Among the most astonishing efforts of nature to relieve herself, are those exerted in some cases of *extra uterine conception*. For when a child has been lodged within the cavity of the abdomen, from which it cannot be extracted in the usual way; nature, by *inflammation*, usually forms adhesion, and in process of time an abscess, so as to eject the *fœtus*, either through the teguments of the abdomen, or by the rectum; and this frequently without considerable injury to the mother's health.

Yet more astonishing are her resources in cases of *necrosis*. For supposing some portion of a bone (for example of the tibia) to be deprived of animation, this she envelops with new bone, united at each extremity with the fibres of the living bone. Here it proves a stimulus, and calls forth renewed efforts of the vital principle. *Inflammation* is produced; suppuration follows; fistulous openings are formed in the new bones, and the dead portions, if not extracted by the surgeon, are dissolved by the pus and floated off.

Thus, nature in almost innumerable cases, even without assistance, is able to effect a cure.

I have already mentioned, in cases of *inflammation*, the efforts to relieve herself by resolution and by suppuration; but when the vital energy in a part has been totally exhausted, and *sphacelus* ensues, she has still one expedient left, and this frequently effects a cure. Fresh *inflammation* is excited, and makes a separation between the living and

the dead. The part deprived of animation is cast off by sloughing; a kindly suppuration follows; and granulation with a new cuticle completes the cure."

We see from these remarks, as well as by what passes in the system daily, that the author of nature has wisely provided a principle which is calculated to remove disease. It is very observable in fevers. No sooner is noxious, or morbid matter retained in the system, than there is an increased action of the heart and arteries to eliminate the exciting cause by the skin, or it may pass off by other outlets established for that purpose. With what propriety, then, can this provision of nature be denied, as it is by some. A noted professor in Philadelphia or Baltimore, ridicules this power in the constitution; he says to his class, "kick nature out of the doors." It was this man, or a brother professor, who exclaimed to his class, "give me mercury in one hand, and the *lancet* in the other, and I am prepared to cope with disease in every shape and form." I have not time to stop here, and to comment upon such palpable and dangerous doctrine. I have only to say, let the medical historian record this sentiment maintained in the highest medical universities in America, in the nineteenth century. I am pleased, however, to observe, that *all* physicians *do not* coincide with such views.

Disease, then, according to what has been stated, may be considered rather a healthy effort of nature than otherwise, or a restorative process to bring about a healthy action.

SECTION III.

GENERAL INDICATIONS OF CURE.

IF then the cause of disease consists in the retention of morbid agents, and a recession of blood from the surface; if it be caused by morbid excitement, as we have already shown; if a deviation from a healthy standard is owing to the inactive state of the excretions, does not the plainest dictates of reason, common sense, and experience, show the necessity of restoring those secretions? Is there, or can there be, any other indications of cure, if they are the only channels which nature makes use of to restore the system to health? and we confess we know no other. There is an effort of nature to restore these suppressed evacuations. The whole art of physic, then, consists in aiding her salutary efforts. Then what else is there to accomplish, but to give such medicines as remove the obstruction and restore the secretions? This is shown by the crisis or termination of diseases in general. They subside when perspiration takes place upon the skin, by diarrhoea, by vomiting or urine, or expectoration by the lungs. With what propriety then, we ask, do physicians of the old school give mercury or bleed? Do they fulfil any indications of nature? Nature cures no disease by salivation, nor does she seldom or ever cure any by bleeding. Hence we may safely say that they are injurious. They produce disease, *sui generis*, of a *specific* character. Bleeding lessens or destroys the heal-

thy effort established by nature, and thereby counteracts her intentions and exasperates the complaint. An objector to this doctrine may say that nature relieves herself occasionally by bleeding at the nose, hemorrhoidal vessels, &c. which must be admitted; yet it is very rarely the case. But can it be proved that it is a healthy action, established for the same purpose as the common excretions? We think it is very evident that this is not the case. It appears rather to be the effect of disease, unequal circulation in the system, and therefore instead of promoting this as we should do if it was a natural excretion, we find it good practice to check it by promoting perspiration, and thereby equalizing the circulation. But to be a little more particular; is any disease terminated, or scarcely any, by a discharge of blood from the system? Do they not almost *invariably* subside, by *vomiting, purging, sweating, and urine*? And do not physicians form a favourable or unfavourable opinion of a disease by these symptoms. Then if health is restored in this manner, is it philosophy, is it reason, is it common sense, is it acting in the capacity of a servant of nature, to institute a mode of treatment, which she seldom or never takes to accomplish this object. Besides, admitting that bleeding occasionally does occur and relieve, it will not prove the propriety of general blood-letting, as this cannot remove the cause, even if it should have the *least* beneficial effect.

That hemorrhage sometimes occurs and affords relief, only shows the wise provision of nature in cases of ignorance on the part of the physician. When he is unable to administer such medicines as will remove a malady by the proper and ordinary passages of the system, certain blood vessels become preternaturally full, and are either distended, or ruptured, by which bleeding follows, succeeded sometimes by relief. Had proper means been used, no such effect would have taken place. This provision of nature is like that established to return the blood after amputation. Certain lateral blood vessels, called anastomosing branches, become distended, which returns the blood, and which never conveyed it thus before. A remarkable fact established especially for accident and ignorance.

Bleeding sometimes takes place from the gums, nose, &c. in scurvy, and in yellow fever; but shall we infer, then, that this is a healthy effort of nature. It is well known to be the reverse. It is in the last stages that these characteristic symptoms prevail. Dr. Rush, I know, endeavoured to maintain that nature, in such cases, struggled to cast off the fever in this manner; and he, therefore, supposing it to be in accordance to her dictates, bled his patients nearly to death. Doctor Ross, a physician from the West Indies, extensively acquainted with the yellow fever, proved conclusively, that hemorrhage or bleedings of this kind, proceeded from debility and relaxation of the blood vessels. That it was no law of nature to cure the fever, but the effect of the disease. Then we ask where is the authority, in imitation of nature, to cure diseases by blood-letting, or salivation?

SECTION IV.

THE PHYSICIAN CAN ONLY BE THE SERVANT, OR HANDMAID OF NATURE,
IN THE CURE OF DISEASE.

IN reality we can cure nothing. We can only remove the offending cause, while nature performs the cure, and therefore lay it down as a fundamental maxim in medicine, that all the physician can do is to act as a servant, or handmaid to nature.

The author of the Medical Sketches thus remarks in relation to this subject:—"The ancients," says he, "not only observed the effects of that instinct, by which brutes are directed to certain plants for relief when they are unwell, and then applied them to the complaints of men, but they also attended with diligence to the manner in which nature, when left entirely to herself, relieved or threw off diseases. They perceived that certain disorders were carried off by spontaneous vomitings, others by looseness, and others by augmented perspiration; and having thus learned how diseases were cured by nature, whenever her powers seemed too weak and tardy, then, and then only, they ventured to assist her by art.

Here it is worthy of observation, that although that sensation or instinct, by which some animals are prompted to select particular vegetables for the removal of disorders, is not given in so strong or particular a degree to man; yet nature often directs him also, though in a more general way, to the best method of relieving his complaints. In fevers, the patient generally has a desire for cooling, light, acescent drinks, and dislikes those which are of a heavier and more heating nature: He covets juicy ripe fruits of various kinds, and nauseates animal food;—a free stream of air, and a spacious cool bed-chamber, are equally salutary and agreeable to him; while confined air, and a small heated room, are pernicious and oppressive. In those instances, what the sick person shews an aversion to, has a tendency to promote the disease; and what he relishes, has an effect in abating its violence.—Other instances of the same kind might be enumerated; I will confine myself to one, which I have frequently had occasion to observe.

Towards the end of very bad putrid fevers, when the patient, exhausted by the violence and length of the disease, lay constantly on his back, had continual startings in the tendons of the wrists; his lips and teeth being covered with a black crust; his tongue trembling, and with difficulty held out; the pulse weak and quick; in this deplorable condition, when the patient seemed insensible to every thing else, he rejected, with every mark of aversion that was in his power, medicines of every kind; but upon his lips and tongue being moistened with wine, he sucked it in greedily, and was soon cured."

This doctrine is further exemplified by the writings of Dr. Hillary, who states in his secret of curing diseases, by adopting a better system, "that by accurately observing all the motions, endeavours, and indications of nature, to carry off and cure diseases; and by observing by what *critical evacuations* she does at last cast off the morbid matter

which caused them, and so restores health; we may, by the same method of reasoning, know both the methods and the means we should use to assist *nature* in producing those salutary effects; if we avoid all hypothetical reasoning, and by thus observing, following and assisting *nature*, agreeably to her indications, our practice will always be more satisfactory and successful.

“For the human body is so wisely and wonderfully formed, that whenever any noxious matter is got into it that would be injurious or destructive, we may observe, that it always so irritates, stimulates and offends nature, that she always exerts her power, or the *vis vitæ*, to throw it off. And she acts with great regularity, order, and uniformity, in her endeavours to expel the offending matter out of the body; and by carrying off the disease, restore health and preserve life.

“And thus, by observing, investigating, and truly knowing, the diseases and their causes, and justly reasoning therefrom, we shall know when to assist *nature* according to her indications; and in this is contained the chief part of medical knowledge, and the true scientific principles of the medical art. And when we shall thus have learned of nature, by observing her laws and indications, we may reasonably hope to render the theory and practice of physick beneficial to mankind.”

CHAPTER II.

ON THE AGENCY OF HEAT AND COLD IN THE PRODUCTION AND
REMOVAL OF DISEASE.

SECTION I.

THE influence that cold possesses in the production of disease, must be evident to every person of the least discernment. Medical writers have imputed the causes of diseases in general to the vicissitudes of the atmosphere; but the immediate effect of cold upon the system seems to have been but little understood, or very imperfect views of it entertained. Nor has the agency of heat in the cure of disease been well understood, or duly appreciated. It is somewhat remarkable that both heat and cold are the cause of most diseases, while they at the same time are (the former more particularly) so eminently subservient to their removal. It would appear that a certain temperature of the body is necessary to maintain a healthy state of the system. Persons, however, will bear a great degree of heat or cold, if applied to the system gradually; but on the contrary, if suddenly applied, the most serious effects follow. Great heat, however, can be much better borne, than a great degree of cold, and it is on this account that cold plays such an important part in the production of morbid excitement. Some parts of the system is much more susceptible of cold than others. The minute blood vessels of the surface, coming in contact with the atmosphere, are more susceptible of its impression than the internal organs. Cold, long and suddenly applied, brings on a torpid or inactive state of the capillary vessels, by which the pores are closed, morbid matter retained, and a deviation from health follows. The blood becomes obstructed in these vessels of the skin, consequently it is withdrawn from the general circulation, and the balance of it is lost, impaired, or rendered unequal. The consequence of all this, is, that the blood recedes, or is driven back from the surface to some of the internal organs of the system; the heart and arteries become distended with an unusual quantity; increased action or more powerful contractions follow to return the blood back to the surface, and to overcome the constriction of the capillary vessels, which greatly increases the circulation.

When we reflect upon the vast quantity of blood contained in the small vessels of the skin, we must be sensible of the effect it must produce upon the system, when so much is stagnated or obstructed, or is driven back and forced upon the vital organs. The great blood vessels become preternaturally full, the various functions impaired, and inflammation and congestion follow. Whatever organ or part of the system is the most predisposed to disease, will feel the effect of this change. It

may be translated to the brain, and create inflammation of the lungs, causing pneumonia; or it may affect the liver, stomach, or bowels. The irritation, occasioned thereby, proceeds from two causes. First, An effusion of blood to the part. Second, Morbific matter retained in the circulation.

The intimate connexion between the skin, the stomach, the heart and arteries, intestines, and other organs, readily accounts for the effect of cold suddenly or long applied to the surface. Sometimes even very slight impressions, thus applied, cause the great quantities of blood in the minute vessels of the skin to recede, and to be thrown internally upon some portion of the viscera. Reaction then takes place. The heart propels the blood with redoubled energy back again to the extremities or the surface, by which the organ affected is relieved of its oppression. It appears, therefore, evident, that there is a flux and reflux of blood constantly passing from the heart or centre to the surface of the body. Thus there is a regular balance or equilibrium maintained in the circulation, which constitutes, as it were, a standard of health.

When this balance of circulation is lost in the system; when the blood becomes unequal, or is driven from one part of the body to another, from the influence of cold or any other cause, morbid excitement or a deviation from healthy action, is the consequence. I have observed this fact for many years in the course of my practice. It has been almost invariably the case, if one part of the system has suffered from disease, particularly inflammation, the opposite part of the system has been unusually cold. For instance, when there has been inflammation or pain of the head or upper portion of the body, there has been a coldness of the extremities. I therefore always first, in the treatment of such complaints, direct my attention to the part thus primarily affected. My great object is to recall or restore the circulation, as soon as possible, by bathing the feet, and by giving such medicines as promote a determination to the surface; and this practice is always attended with the happiest effect. As soon as the cutaneous circulation takes place, the disease is relieved. It is very clear that the blood thus recedes from the surface, in fevers, and a great variety of other complaints. After the body has been exposed to cold, suddenly or long applied, we see that the circulation ceases or is lessened in the capillary vessels, by the chills, sense of coldness, paleness of the skin, with a husky or dry state of it; and the great heat and commotion that rages throughout the system, arises, no doubt, from an engorgement in the heart and arteries, with the irritation from the morbid matter retained in the circulation. It requires, therefore, but a small share of common sense or discernment, to learn the indications of cure; which are, not to abstract any portion of blood from the system, which decreases the power of overcoming the disease in proportion to the quantity taken by inducing debility, but to recall the blood to the surface by the application of heat, steam, or sudorific medicines, or in other words, to equalize the circulation.

Cold, it will be seen, therefore, causes a torpor and inactivity of the exhalents, and the system generally; while heat has an effect diametrically opposite, by stimulating these vessels to perform their proper

functions; the effect of which is the restoration of warmth, vitality, and circulation. These phenomena are exemplified in the repulsion of eruptive diseases; upon the application of cold, the eruptions disappear, and are translated to some other organ. In gout, it will attack the brain, stomach, or intestines. The erysipelas or St. Anthony's fire, is sometimes characterised by the same symptoms; also the measles, small-pox, &c. The remedy, therefore, must be obvious. Bleeding, which is resorted to by many, will take or endanger the life of the patient, by averting the power of reaction which is so essential to recovery, while the application of heat to equalize the circulation, will prove a sovereign remedy. Bathing the feet and surface with warm applications and medicines to promote perspiration, will return the eruption to the surface, or will carry them off through their proper channels, or emunctories. By this means, the morbid excitement preying upon the vascular system or internal organs will be relieved.

We may therefore see, from the effect of heat and cold upon the system, how greatly they are concerned in the production of disease, and the restoration of health. A due regulation of both are of vital importance to the animal economy. If either is suffered to prevail to too great a degree, life becomes extinct.

It has been shown that heat and cold, especially the latter, is a fruitful source of disease; that they are (the latter more especially) the most common cause of all complaints; and admitting these premises, the importance of heat for their removal must be duly appreciated in a medical point of view, as well as the importance of cold where heat predominates.

Heat, properly applied to the system, will bring about symptoms the reverse of that occasioned by the exciting cause of the complaint. When the blood recedes from the surface, settles upon some organ, and by its accumulation, together with the irritation arising from retained perspirable matter, the substitution and application of heat, and other stimulating medicines, will cause a revulsion whereby the congestion, irritation, &c. will be removed by unloading these internal organs, and causing the blood to re-circulate in the vessels of the surface.

When disease proceeds from too much heat of the body, or when fever arises to expel from the system morbid matter, and to equalize the circulation, it often becomes necessary to moderate it by lessening arterial excitement. In such cases, tepid or cold water will have a salutary effect, by abstracting a portion of heat from the body by the evaporation that follows, together with the stimulus given to the exhalent vessels of the surface.

SECTION II.

DISEASES IN WHICH HEAT AND COLD IS BENEFICIAL.

It may not be improper to mention some forms of disease, in which heat and cold will prove eminently beneficial.

1. *Febrile Diseases.*

Fevers, as we have shown elsewhere, proceed from a check of perspiration, cold commonly proving the exciting cause. It must be evident, therefore, that the first duty of the practitioner is to remove the injury which it has caused to the system. The skin has become torpid, its pores closed, by which the vascular system particularly is disordered as a consequence. Heat must, therefore, be applied both internally and externally, to remove this morbid state of the skin, by restoring perspiration.

The blood is sometimes driven so suddenly and so forcibly from the surface and extremities to the internal organs, that the powers of nature are suspended, (occasionally cut off,) and a state of asphyxia or swooning follows. It is on this account that not even a particle of blood can be drawn in such cases. The office of the heart and arteries which is to send or propel the blood to every part of the body, partially or wholly ceases, on account of the prostrating and overwhelming influence of intense cold, giving them such a shock, that reaction cannot take place, or takes place very feebly. This was remarkably exemplified in the cold plague which raged in the southern and western states some years ago. Persons were seized with it in the manner just mentioned, and Dr. Anthony Hunn, of Kentucky, states that every other means proved useless but the hot bath, which recalled the blood from the centre to the surface. As soon as the heart and arteries became unloaded, they immediately began to play and perform their offices, when reaction and heat, consequently relief immediately took place.

The following case, related by Dr. Hunn, is very applicable. "Mr. N. Rochester Esq. came from, what is termed, the wilderness, for medicines for his father-in-law, Mr. Johnston, who was dangerously ill with the 'cold plague.' He had ridden day and night, and swam several streams, in rainy and cold weather. When he was getting the medicines, I predicted that he would undoubtedly, also be taken with it, if he returned. I advised him to get a negro from his brother in Danville, to send him on full speed to his father-in-law, while he remained for a day or two to recruit and refresh himself. He pleaded the absolute necessity of speedily returning personally. He started, but on the short road from town to his brother's mansion, he was suddenly taken with a terrible shaking and inexpressible torments, which drew him from his horse. He was carried to his brother's mansion; and I was immediately sent for. In a state of suffocation, with a clay cold feel of hands and face, and red suffused eyes, he exclaimed, that 'his insides were tearing to pieces,' with a constant, raging desire to urinate, he could not void a drop. The hot bath was quickly prepared, and the patient put into it. In less than half a minute, he said: I feel easier and can void urine. The blood in his face, and warmth, and the pulse, (which was before hardly to be felt) gradually returned, and a warm sweat dropped from his forehead. When he was taken out of the bath, he was completely relieved: for the recovery was in such cases, as sudden as the symptoms were dangerous and alarming. A gentle, warm sweat was kept up for twenty-four hours, when he again started for the wilderness. On his

road to his father-in-law's, he was again taken, but immediately using the hot bath, was enabled to reach the place of his destination, and remained well. Mr. Johnston, though despaired of, also quickly recovered by the same means.

In its highest grade, this sickness wanted nothing to cure it speedily, but the hot bath, with such medicine as kept the patient in a constant, warm perspiration, not amounting to an actual, profuse sweat: for this might cause indirect debility."

It is stated that a disease raged several years ago in the New-England states called *typhoid pneumonia*, attended with similar symptoms. The skin and extremities were remarkably cold and torpid, with chills, &c. Nervous energy evidently much diminished. Nothing was found of so much utility in this complaint as heat or perspiration. The common people I infer from the statement, treated it the most successfully, by using the vapour bath. It is said that its application arrested it at once. How different is the effect of heat and perspiration in these and similar diseases from the practice of abstracting blood; which debilitates the system, protracts the complaint, and endangers the life of the patient, or at best, if he recovers, injures his health; while the course here recommended, returns the vital fluid to its proper channel, thereby removing congestions and inflammations, restoring strength and warmth, equalizing the vascular and nervous influence, and removing the shock, and mischief occasioned by the cold.

Dr. Gallup who wrote on the disease above mentioned, thus remarks: "As the causes of the disease act upon the nerves, and show their morbid influence on the surface of the body, by coldness in the first stage, want of perspiration, &c. the natural indication is to restore warmth and activity to the surface as quickly as possible. I have succeeded in this often times by the use of the warm bath. It is one of the most powerful agents we can employ, while, at the same time, it is safe and agreeable. Nothing is more common than for patients to express it as a great luxury. If it does not immediately bring on sweating, it invites the circulation to the surface, relieves external chills, and internal pain, and prepares the system for the remedies which are soon to follow. Where the bath cannot be obtained for immersion, rolling the patient several thicknesses in blankets, dipped in warm water, serves as a substitute.

Perhaps no remedy is better agreed on as being generally useful in this disease, than sweating, or, in other words, the application of external heat. If it is not always useful, it is in some solitary cases, where there is an abundant heat from reaction having taken place in vigorous habits. At the onset of the disease, however, this remedy may be said to be always useful. External warmth is of vast importance in keeping up the centri-fugal action of the system. If the action is allowed to recede to the centre, by neglect of external warmth, after sweating has been used with advantage, the patient is apt to be exercised with sinking distress, and will be in danger, if heat be not immediately applied.

Dr. Armstrong, speaking of typhus, observes, "the warm bath is a safe and efficacious remedy, and, with the means above mentioned, has considerable effect in equalizing the circulation." Again, in speaking of prostration. he remarks: "This depression of the animal heat,

however, occasionally come on in the collapse of typhus, without any apparent cause; an instance of which I have witnessed in a medical gentleman, who I believe would have died if external and internal warmth had not been promptly and perseveringly employed. When the pulse still remains oppressed, and the tide of the circulation does not return to the surface, some wine with warm water should be occasionally exhibited, and the patient speedily immersed in a bath, strongly impregnated with salt, and at least about the temperature of 100 deg. He should remain in the bath till his skin becomes warm, and on being removed, it should be well rubbed all over with hot flannels; and he ought then to be laid in an aired bed with bottles of warm water at his feet. This plan together with tepid wine and water occasionally, will often promote a flow of blood towards the skin, and considerably relieve the viscera from congestion."

The following remarks on cholera, from a late number of the Medical and Chirurgical Journal, further corroborates these principles:

"In the history of disease in this country, we recollect but one that appears to bear any analogy, either in its general mode of attack, its great fatality, or the means most clearly indicated in its treatment, to the present cholera of Europe. The disease to which we refer, is the *spotted fever*, which prevailed in the state of Maine, in the year 1814. Its symptoms were more various than those of the cholera, and its fatal issue was not quite so speedy. But the attack consisted in the main, in the sudden departure of blood from the surface, and an appalling prostration of the powers of life. Having been an eye-witness to this epidemic, it has been recalled to our mind by every history we have read of the symptoms of cholera. We have seen persons in the fulness of health, suddenly fall under its blow, apparently lifeless, and the sudden and obstinate coldness of the surface, in all cases, gained for the disease the popular name of *the cold plague*. In no disease have we seen so marked effects, from different modes of treatment. Purgatives and venesection were generally followed by fatal results; where calomel was given, the unhappy sufferer often died whilst under its operation; and in spite of most forms of treatment, from the first, most heating and stimulating remedies internally and externally, with an unsparing hand, exerted an entire control over the disease. This practice was pursued with marked and almost uniform success by Dr. Page of Hallowell, by that man of Ross, whose benevolence will never be forgotten by the hundreds of his townsmen, to whom it has ever been liberally extended. In the small town of Wiscasset, containing about two thousand inhabitants, two or three (equal to sixty a day in Boston) were dying daily of this epidemic, until Dr. Page was persuaded to visit the place; and after the day he entered the town and introduced the mode of treatment, that had been so successful at home, *not an individual died of this disease.*"

I have extracted the following remarks from a communication by Dr. North, upon a malignant fever, lately prevalent in New London, Connecticut, and which still further corroborates the doctrine of disease here advocated:

"As counter illustration in regard to malignant asthenia, the reader

is informed, that the first thirteen patients at Winchester, Litchfield county, were treated about twenty years ago upon the *then* fashionable, cooling, depleting plan of treating fevers; and I have the very best authority for saying that all of these patients died. And their constitutional organization was good, for they were young persons. Then the sweating and stimulating plan was introduced by the memorable Dr. Samuel Woodward, in imitation of Mrs. Hurlburt's process. After this, the success was as great there as here, having reference to the north part of Litchfield county, and some other places. There was much oral testimony against depletion and in favour of sweating, long before any thing was printed on the subject. This accidental discovery, or revival of an ancient practice, in regard to malignant fevers, or malignant asthenia, I regard as being now fully established by our experience in New London, *if it was not a long time ago*. I have witnessed the malignant asthenia in both counties, i. e. in Litchfield and in New London county.

The non-professional reader will not want to be troubled much with an account of symptoms or details in regard to medicines. Professional readers have already my views in regard to particular symptoms and with respect to particular treatment, in cases of spotted fever, published in New-York, twenty-one years ago.

Non-professional readers may imagine, that information in regard to depletion and sweating, is annually taught in our medical schools. Such is not the fact.

The diseased action of the vital elements of our organization in the spotted fever and in malignant cholera are alike in one happy respect, viz. no permanent *organic mischief* is usually left to torment us, as *seculæ* to those two forms of malignant asthenia. Such is not the case with contagious epidemics, such as small-pox, measles, scarletina, &c.

This is the first time that spotted fever has manifested itself on the sea coast; although sporadic cases have oftener occurred than many are willing to allow.

I have been often asked, why I did not instruct every one to cure the spotted fever. The reason is, that it is more difficult to teach some how to treat the spotted fever, than it is to cure the disease. The indolent propensities and want of inquisitive talents, prevents even highly respectable medical gentlemen from giving their attention to the subject at all, unless the pestilence breaks out in their own vicinity.

Those physicians abroad, who may be fond of marvellous mysticism, if there be any such, may not like the simple swearing and stimulating treatment pursued in New-London. It is hoped, however, that *our candid public*, will be thankful that so few deaths have happened; and for the expense and trouble which has been saved, by the non-contagious doctrine which has been orally taught. The facts in review will show a great difference between knowledge and the want of it in regard to the wise, economical and safe management of epidemics.

Time has not been found for making post mortem examinations. This is less to be regretted, because our epidemic is a functional malady; and its correct treatment must be learned from personal experience and the testimony of experienced witnesses, in regard to it. There is

now much such testimony before the American public, and it should be promulgated in Europe.

The malignant cholera is probably a more dangerous form of malignant asthenia, than spotted fever. And yet I must believe, that self-esteem and other propensities prevent the poor in Europe from applying to cholera hospitals, *as soon* as is needful for the cure of many patients. If the plan in use among a few medical men in this country was adopted, mortality would probably be lessened in the eastern world. The plan alluded to is to teach the ignorant to take a sweat in a warm bed, the instant they begin to feel unwell, and not wait for the tardy arrival of a physician. I may be mistaken in regard to cholera, not having seen the disease.

I hope the promulgation of the above facts may do more good among the sick than many medical speculations. These last may however give notoriety to authors, and manifest the greatest ingenuity of human brains. Broussa-ism, Homoeopathic-ism, and slight monomania of many kinds may be useful, by amusing a grave profession, yet not very much benefit the sick."

2. Rheumatism.

In rheumatism, also, similar effects take place. It is in general caused by the sudden transition from heat to cold, bringing about the symptoms before mentioned, and the same treatment is here called for.

Sometimes the force of the disease is concentrated upon some particular part of the body, the head, lungs, liver, or the joints. When this happens, the act of producing warmth of the surface, and restoring perspiration, affords immediate relief, and often cures the disease in its incipient or forming stage. It is exceedingly important in fulfilling the indications here laid down, (in inflammatory rheumatism particularly, as well as febrile diseases) that while we administer stimulating sudorifics, or sweating medicines internally, we apply heat externally to the whole surface of the body, in order to remove the stricture, or tension of the cutaneous vessels. If this precaution is not attended to, stimulating medicines will often increase, or exasperate the disease. The reciprocal influence between the stomach and surface, is such, that attention must be directed to both at the same moment or time, if we wish to equalize the excitement. Such is the sympathy or intimate connection between the stomach and the skin, that it seems impossible for one to suffer, or be affected, without the other likewise suffers.

3. The Lungs.

The lungs are very liable to receive morbid impressions from the influence of cold suddenly applied to the body. After a person has been very much heated, and immediately after exposed to a current of air; or if he has been long exposed to the sedative and debilitating influence of cold, the pores become closed, recrementitious or morbid matter is retained in the system, and the blood in an accumulated quantity is thrown upon the mucous membrane, or the parenchyma of the lungs. Irritation and inflammation takes place, which, if not arrested, is followed by suppuration. Now under these circumstances, *perspiration*

must be immediately resorted to, to counteract the deleterious effect of this morbid agent, viz. cold. The blood also in this case, as in the other, recedes from the surface and is thrown upon the lungs, causing engorgement and irritation; therefore it must be immediately recalled by these means. It is here that we have it in our power to arrest that terrific monster, (phthisis pulmonalis, or consumption) which daily slays its thousands, by instituting this course of treatment which will terminate the disease by resolution, or without suppuration. Bleeding, so far from accomplishing this desirable end, will inevitably bring on dangerous or fatal prostration, and in all probability carry the patient to an untimely grave.*

4. *Dysentery.*

The dysentery is a disease in which the application of warmth to the surface, and diaphoretic medicines, are very serviceable. It has been thought by some, particularly the ancient physicians, to be a fever translated to the intestines, and from the effect of perspiration in the complaint, we are led to believe, that it arises from a retention of humours or acrid and morbid matter which is translated to these parts. As soon as the patient begins to perspire freely, he experiences relief. The same good effects arise in bowel complaints generally. Spotted fever, cholera morbus, cholic, diarrhoea, &c. Dr. Mosely in his work on diseases of warm climates, strenuously insists upon the propriety of sudorifics in bowel complaints. External heat in the form of fomentations, are invariably attended with an admirable effect in bowel complaints of every description. They divert the fluids from the intestines to the skin, and by their stimulating and relaxing properties, prove very serviceable. The surface and extremities in these diseases are pale and cold, from which we see that the balance of the circulation in the system is lost. The recession of blood in connection with those foreign agents which is not eliminated by the skin, operates as an undue, and as a disease-creating stimulus in the intestines.

* A person, speaking of the diseases of poultry, makes the following remarks, which shew that the agency of heat and cold upon animals is similar to its effects upon the human system.

1. In these animals, cold exercises a constant, and determinate action on the lungs.

2. The effect of this action is the more rapid and more severe, the younger the animal is.

3. When cold does not cause acute and speedily fatal termination of the lungs, it produces a chronic inflammation, which is pulmonary consumption itself.

4. Heat always prevents the attack of pulmonary consumption; when the latter has taken place, heat suspends its progress, and even sometimes arrests it entirely, and effects a complete cure.

5. Pulmonary consumption is never, in any stage, contagious: fowls affected with that disease, were not only all day long with the healthy, but at night roosted in the same places, without communicating their disease to them.

6. The action of too long confined air exposes these animals to abscesses of the cornea, and inflammation of too ball of the eye. These abscesses and inflammations are also caused in a still more cruel manner, by cold, especially when accompanied with moisture. This fact explains the manner in which diseases are generated in men, as well as animals.

5. *Pleurisy.*

In pleurisy I have been called when the patient appeared to be dying from the cause last mentioned. The irritation upon the pleura was so great, that a sensation was created as if needles were piercing it, the breath nearly gone. In this case, when the disease threatened immediate destruction of life, and when scarcely a physician could be found either in Europe or America, who would not have copiously drawn the vital fluid, and that repeatedly for days no doubt, I have pursued the course above recommended, viz. recalled the vitiated blood to the surface by producing free perspiration, and I have had the pleasure of witnessing sudden abatement of the pain, succeeded by a recovery of the patients in a few days.

6. *Apoplexy.*

In apoplexy, this course is attended with much better effects than general blood letting. I cannot think in this disease there is too great a quantity of blood which calls for an abstraction of it, but the disorder arises from unequal circulation. The blood recedes from the surface and extremities, and is accumulated or effused upon the brain. The remedy then is, *to equalize the circulation*. I have never failed to arrest the disease by such treatment, particularly in the commencement.

7. *Fits.*

In fits, this practice is equally efficacious. I never knew it fail of affording relief. I was called sometime ago to a man who had been subject to convulsions for years, and he had sometimes several in the course of the day. One of our most popular physicians in this city repeatedly bled him, without affording any, except momentary, relief. The treatment was now reversed, bleeding was entirely dispensed with, and means made use of to divert the fluid from the brain to the surface and extremities. Nothing at all was done for him except on every accession of the fit, to immerse his feet in warm water to which ley had been added, sufficient to render it somewhat sharp or biting to the tongue. This treatment alone in a short period effected a cure. I think I gave him little or no medicine.

8. *Syncope or Fainting.*

In asphyxia and fainting of every kind, the immersion of the feet in warm water, will restore the patient.

9. *Hysterics, (Hysteria.)*

In hysteria (hysterics,) the same benefit will be experienced. The extremities here are cold, the surface pale, attended usually with chills, all which is accounted for on the same principles. Physicians generally are in the habit of bleeding in this complaint, notwithstanding it is a disease of debility, but this practice renders the disease worse. The treatment should be the same as before recommended. The feet and surface must be bathed with warm water and weak ley, and other means recom-

mended to cause perspiration. If fits come on, the feet should be immersed in warm ley water.

10. *Intermittent Fever.*

In the intermittent fever, or fever and ague in the cold stage, stimulating medicines given internally, and heat applied externally, will be found highly beneficial. The application of sudorific or sweating medicines, just before a paroxysm or fit comes on, will often cure or diminish the violence and continuance of it. The duration of the hot stage is always in proportion to the cold; hence those medicines which lessen or moderate the cold, necessarily shorten or lessen the hot stage. The patient should therefore be well covered in bed, hot bricks or bottles of water may be applied to the sides and feet, warm drinks freely taken until perspiration succeeds.

In some cases of intermittent, so powerful is the influence of cold upon the system, that little or no reaction takes place. Nothing but heat in this case will save the life of the patient.

11. *Head-ache, (Cephalalgia.)*

In head-ache, the same course will be found useful by diverting the fluids from the head and extremities; the pain arising from different causes will cease. That head-ache arising from *difficult* or *suppressed menstruation*, by bathing the feet in warm water and using a hip or warm bath, will often be removed without any other medicine.

12. *Dropsy of the Head.*

The dropsy of the head is also very much relieved by this process, by bathing the feet and surface, and cold or tepid applications to the head. It powerfully assists in allaying the inflammatory action.

13. *Inflammation.*

In phlegmonous and erysepeletous inflammation, perspiration, aided by warm and relaxing poultices, are attended with excellent effects.

14. *White Swellings, and other Painful Diseases.*

In white swellings and other painful diseases, the application of heat in the form of steaming, is attended with the happiest effects, and indeed is often a complete and sovereign remedy. Cases have been relieved and cured by it, which has baffled the skill of our most noted physicians. This principle properly applied, will mitigate the acute symptoms of white swellings, and similar complaints in fifteen or twenty minutes, and by its repeated application, will wholly remove the horrid sufferings of the patient.

15. *Ophthalmia, or Inflammation of the Eyes.*

It is difficult to make a practitioner, unacquainted with the fact, believe what salutary effects follow the means here recommended in cases of ophthalmia, or inflammation of the eyes. I have cured blindness of one or two years standing, when the disease has depended on sub-acute

inflammation. I have merely ordered the feet to be bathed every night, or every other night, for a great length of time, and this treatment has recalled the blood from the head to the feet and surface, which, of course, lessens the pain and inflammation of the head.

A lady whose child I had formerly cured of sore eyes, has just stepped into my office, in company with a neighbour, whose daughter is now afflicted with the same complaint. In prescribing for it, she soon asked, "shall not her feet be bathed?" "This," added she, "contributed as much towards curing my child, as the medicine." When her head was in pain, and her eyes much inflamed, bathing her feet gave immediate relief. This will not appear strange to the physiologist, or the physician, who understands the pathology of diseases in general. He will at once see the cause, and the indications of cure.

We might here go on, and enumerate a great variety of other complaints, in which the same treatment will be found exceedingly beneficial. But sufficient has been written to show its importance and utility, as well as to give an idea of all other cases in which it may be advantageously applied.

This principle or method of treatment is very extensive. We know not how many diseases may be treated in the same manner. By substituting agents diametrically opposite to those which cause the disease, the cure is effected. For example, a complaint caused by acidity in the stomach, is cured by an alkali. In inflammation, or heat of any part, cold or refrigerant applications afford relief, and *vice versa*. Scurvy, which is caused by a long course of animal food, is cured by substituting vegetable food. Persons who are brought near the grave by this complaint, are immediately restored to health by pursuing this treatment; all which demonstrates the truth of the latin maxim:

"Contraria contrariis medentur."

The translation of which may be thus rendered: Diseases are cured by means or agents diametrically opposite to the causes which produced them.

The great object should be in every complaint, first to ascertain if the circulation is uniformly and equally carried on through the system; and if this is not the case as will be found in most diseases, the means recommended with others that will be hereafter mentioned, must be resorted to, and persisted in until warmth and perspiration is restored. Copious and long continued perspiration except in the most urgent cases, should be avoided as injurious and dangerous. Many have been literally sweat to death, by too great and too long continued heat; more particularly by the steaming process now so much in fashion by those called, "Patent Doctors."

Dr. Thompson, who has procured a patent to treat diseases principally by steaming and puking, states in his theory of medicine, that *heat is life*, and *cold is death*, and under this impression that this vital principle, (heat) cures almost every disease, steaming or sweating is carried to such a degree, that many have lost their lives by it. The abuses of it must be carefully guarded against.

It must be continually kept in mind, that in advanced stages of some

diseases, for instance typhus fever, when there is great prostration of strength, the heart and arteries having become exhausted by their ineffectual struggle to return the blood and morbid humours to the surface, to overcome the constriction of the skin, very stimulating sudorific medicines internally should not be given. In this case, the most heating or stimulating agents designed to promote perspiration, will only increase the disease. When called under such circumstances, the blood must be invited from the centre to the surface, by repeatedly bathing the whole surface with tepid or cold applications, according to the temperature of the body.

SECTION III.

MEANS OF PROMOTING WARMTH AND PERSPIRATION.

I have already hinted at some of the means to promote warmth and perspiration; but it may be proper to dwell somewhat more upon them in this place. In general, perspiration may be promoted by taking warm diluent drinks, and nothing is better than a strong infusion of catnip, freely drank; also bathing the feet in warm water, or weak ley. The surface in most cases may also be bathed with the same, as warm as possible, while the patient is in bed. The clothes may be raised with one hand, and a piece of flannel dipped in warm ley applied with the other hand to the surface. When one side of the body has been thoroughly bathed from the neck to the feet, then the sick person must be turned on the other side and bathed in the same manner. The liquid should be kept hot or warm by the bed side, and additional clothing sometimes becomes necessary to aid the process. Bottles of hot water may likewise be placed to the sides and feet. These means will answer in many cases, but it often becomes necessary to apply more powerful means to accomplish this object. The pores of the skin are frequently so closed, or constricted, that a greater degree of heat is necessary to open them. For this purpose there is nothing more simple and effectual than the *Vapour Bath*, mentioned under the head of baths, page 87. Certain other medicines to answer these indications will be mentioned, while treating of different diseases.

SECTION IV.

THE REMEDIATE INFLUENCE OF COLD.

I will now speak of cold applications. This is a class of very great importance, one which has been too long in disrepute, and too little used in our attempts to alleviate human sufferings. Cold applications are required in high feverish heat, in all bruises, sprains and inflammations, in violent head-aches, sore eyes, wasp stings. &c. &c.

Now let us look at the *reason* for applying cold. It is in all cases to *prevent too much inflammation*. It is one law of our nature as before shown, that an unusual quantity of blood immediately rushes to any part inflamed. As proof, think how quick the eyelids will swell when struck, or the arm swell when stung by a wasp. Now this swelling is in part owing to the flesh being crowded too full with blood. Again: it is another law of our nature that less blood goes to any part that is cold, and more to any part that is warm. As proof, in winter we come into the house with hands, face, ears, &c. white with cold; but we find the good woman sitting by the fire red with heat.

By this course of reasoning, then, we see why cold is applied; and may also learn all the cases in which it is required, viz. in all cases where we wish to prevent inflammation and swelling, or where swelling has taken place and we wish to remove it. And may learn likewise how effectually this may be done, by remembering that if we remain out in a cold evening long enough, that is, apply cold enough to the ear to freeze it, we have driven every particle of blood from it, and it is as white as a lily. In all common cases, much less cold than that will answer our purposes. The effect will always be the same, differing only in degree. Cold will always keep the blood from rushing to the part; that is, will prevent inflammation and swelling, and that is what we are called upon to do. Having proved then that cold applications are necessary and useful, the next question will be, how will this application be made? What article shall be used?

I will say that there are many articles, and many ways of accomplishing this object; but the cheapest, the most convenient, the neatest and altogether the best mode of applying cold, is by means of cold water. Cold is applied then in cases of inflammation of various kinds. Of the brain, the application of cold water is attended with benefit. In certain cases of typhus fever, ablution and the effusion of it has often been attended with benefit. Also in other febrile diseases, where the heat is above the natural temperature of the body, except in eruptive diseases in which it should not be used. In hemorrhages cold water is sometimes used with advantage. In weak and inflamed eyes it imparts tone and a healthy action to them. In contusions and sprains the application of cold water is sometimes useful, and occasionally it has been found of benefit in the form of the cold and shower bath, but heat or warmth in most diseases is far preferable.

Cold seems almost invariably when long and suddenly applied to be repulsive to nature. After its application, particularly where the system is feeble, it is necessary that reaction or an effort of the system be instituted to counteract its effects. Therefore when applied as above or last mentioned, it must be considered as an enemy. Throughout the whole course of my practice, I have found that heat exerts a much more salutary influence both in health and disease, and is therefore the most congenial to the system.

SECTION V.

ADDITIONAL REMARKS.

ALTHOUGH I have laid great emphasis upon the necessity and importance of promoting warmth and perspiration in diseases, I wish it not to be understood that it is *insisted upon or recommended to the exclusion of other appropriate means, or that other remedies be in any wise neglected*. I have dwelt more largely upon this subject, because physicians generally have not paid that attention to it which it deserves, and because they, like Dr. Sangrado, have substituted bleeding for perspiration, believing no doubt that no other means are sufficient to reduce it. Again, I have not in this treatise insisted so strenuously upon attention to the other excretions, because there is not so great a disparity in our views, as there is on the subject of the capillary system.

We all agree upon the propriety of fulfilling most of the indications for the cure of disease, but *the wide, the radical, the irreconcilable difference*, consists in the various means made use of, to fulfil those indications of cure.

CHAPTER III.

MERCURY, AND OTHER MINERALS.

SECTION I

On the Pernicious Effects of Mercury, by James Hamilton, M. D. Fellow of the Royal College of Physicians, and Professor of Midwifery in the University of Edinburgh.

AMONG the numerous poisons which have been used for the cure or alleviation of diseases, there are few which possess more active, and of course more dangerous powers than *mercury*. Even the simplest and mildest forms of that mineral exert a most extensive influence over the human frame, and many of its chemical preparations are so deleterious, that in the smallest doses they speedily destroy life.

The late Dr. Parr, in his *Medical Dictionary*, (Vol. I. page 177,) thus expatiates on the virtues and uses of that mineral. "As a medicine, there is scarcely an indication that mercury cannot supply. There is no more certain and active emetic than the *mercurius vitriolatus*; a more powerful laxative than the *calomel*; a more effectual and steady diaphoretic and stimulant than the *mercurius muriatus*; a more certain emmenagogue than *calomel*; a more effective errhine than the *turpeth mineral*; a more infallible sialagogue than either of its preparations."

Practitioners of the first respectability prescribe on every trifling occasion *calomel*, or the blue pill. Thus, *calomel* is now almost the universal opening medicine recommended for infants and children, and a course of the blue pill (which is one of the mildest preparations of mercury) is advised, without any discrimination, for the cure of trifling irregularities of digestion in grown persons.

Dr. Falconar of Bath (in a paper inserted in the first volume of the *Transactions of the Medical Society of London*, dated May, 1809,) has in strong language reprobated this practice, and has pointed out many of the dangerous effects of the indiscriminate use of mercury. His warning voice, however, has not been listened to; for the employment of mercurial medicines has, for several years, become more and more extensive.

But when the effects of mercury upon the human body are accurately investigated and duly considered, it cannot fail to appear, that infinite injury must accrue from its use.

It is the object of the author, in the following pages, to illustrate those propositions; and in doing so, he readily avails himself of the

recorded facts and observations of those respectable members of the profession, to whom proper deference is due.

In detailing the changes produced upon the system by preparations of mercury, it is necessary to premise the well known fact, that there are some individuals on whom such medicines, though continued for a considerable length of time, have little or no perceptible influence, unless the activity of their form, or the magnitude of their dose, be calculated to excite immediate effects. For example, whatever the constitution of the person may be, a very few grains of the muriate of mercury given in substance, prove rapidly fatal, and large doses of the submuriate are quickly followed by vomiting and purging. On the other hand, instances of constitutions which are unsusceptible of the influence of the ordinary doses and preparations of mercury, are very few in comparison with those which are affected by the smallest quantity of that mineral.

Preparations of mercury, exhibited either internally or externally for any length of time, increase in general the action of the heart and arteries, and produce salivation, followed by emaciation and debility, with an extremely irritable state of the whole system.

These effects of mercury are expressly mentioned, or virtually admitted, by every author, ancient and modern, who has directed its use; and it must appear very extraordinary, that their full influence should have been misunderstood, or at least not sufficiently regarded.

The first effect enumerated, is an increased action of the heart and arteries, that is, a more than usually rapid circulation of the blood through every part of the body. This also occurs in feverish and inflammatory disorders, and in all is accompanied with an augmentation of the animal heat. But in feverish disorders there is neither any apparent change upon the sensible qualities of the blood, nor any unusual flow of the ordinary secretions; while in inflammatory affections the sensible qualities of the blood are materially altered, and either some of the secretions are furnished in greater abundance, or topical congestions, that is, obstructions in the vessels of particular parts, take place.

Accelerated circulation of the blood, in consequence of the use of mercury, is attended with the most obvious of the circumstances which arise from inflammation. Blood drawn from the arm of the most delicate and debilitated individual, subjected to a course of mercurial medicines, exhibits the same buffy crust with blood drawn from a person labouring under pleurisy, and the secretions from the skin or from the kidneys are greatly increased.

In inflammatory complaints, topical congestions occur more frequently than increase of secretions, while the reverse of this happens where the inordinate action of the heart and arteries is occasioned by the use of mercury.

There is another remarkable difference. In inflammatory diseases, the muscular strength, in many instances, continues unimpaired till towards the termination of the complaint. Thus, every practitioner knows that individuals labouring under pleurisy have walked several miles within a few hours of death. But from the time that the influence of mercury becomes evident, the general strength declines rapidly.

It appears, therefore, that the increased action of the heart and arteries excited by mercurial medicines, produces not only the same injurious changes upon the body with those arising from inflammation, but also certain effects peculiar to itself. This important fact has been incidentally noticed by numerous authors, although the natural inference to be deduced from it has been very much overlooked. Dr. Carmichael expressly says, "mercury induces a specific fever, different from all others, and attended with an increase of the various secretions."

Reasoning upon the subject, it might be concluded, that if there be an inordinate action of the heart and arteries, attended with an altered state of the blood and with debility, while the increased secretions accompanying this inordinate action have no tendency to allay it, the health must be rapidly undermined; and if there be ulcerations in any part of the body, they must as certainly degenerate into malignant sores, as blistered surfaces or scarifications mortify in cases where the living powers are much exhausted.

Experience has proved the reality of such conclusions, but prejudice and inaccurate observation led many practitioners of deserved reputation to attribute those effects of mercury to other causes, till Mr. Mathias published his valuable remarks on what he terms the mercurial disease. Thus, before Mr. Mathias's publication, the injurious effects of mercury in some syphilitic cases were attributed to the original virus operating on scrofulous, or cancerous, or scorbutic constitutions, or to some complication or anomaly which was inexplicable.

Mr. Mathias has unequivocally shown, that certain dangerous changes upon ulcerations originally syphilitic, and certain derangements of health, occur whenever mercury has been administered in too acrid a form, or in too large a quantity; and his remarks are confirmed by the experience of every practitioner who has, with extensive opportunities of observation, been attentive to the phenomena. He imagines that the action of the mercury in such cases is of a specific or peculiar nature; it more probably, however, is merely in an inordinate or excessive degree, and in no other respect different from what it is in every case. It is a well known fact, that exposure to cold, bodily fatigue, and irregularities of diet, particularly indulgence in intoxicating liquors, have aggravated the severity and malignancy of syphilitic ulcerations, whether primary or secondary. But as all those different causes concur only in one respect, viz. in exciting inflammation, it is evident that mercury, when it affects the system, must be productive of equally injurious changes upon the ulcerations in question and upon the general health, because it probably induces a more violent degree of inflammation, than exposure to cold or irregularities of diet.

Upon the same principle may be explained the fact noticed by all practical writers, that scrofulous sores, and scirrhus tumours, and cancerous affections, in certain stages of their progress, are much aggravated by preparations of mercury.

Dr. Blackall has shown, that, from the same cause, thickening of various membranes, particularly the pericardium and pleura costalis, has ensued.—and it is more than probable, that the aching pains which

so often follow courses of mercury are owing to partial adhesion, and thickening of the cellular membrane in contact with the fascia and extremities of the muscles. From Dr. Blackall's cases, too, there is reason to believe, that the inflammatory diathesis induced by mercury may continue for a considerable time after the mercury has been laid aside, and without any manifest signs. When individuals in this state are subjected to accidental exposure to cold, or indulge in irregularity of living, a violent and anomalous indisposition takes place, which is apt to terminate fatally, or to occasion a broken state of health.

Secondly,—Salivation, or an excessive and unusual flow of saliva, in general follows the increased action of the heart and arteries, and is preceded by a certain metallic taste in the mouth, and is attended with a peculiar odour of the breath, different from what is ever perceived in any natural disease.

When an increase of any of the ordinary secretions takes place during the course of inflammatory affections, the local complaints may be relieved. But the excessive flow of saliva, in consequence of mercury, is accompanied with more or less local inflammation of all the parts within the mouth. In some cases, beside the ordinary ulceration of the gums, and loosening and final separation of the teeth, the tongue, moveable palate, &c. swell and ulcerate to a frightful degree.

Thirdly,—Emaciation so commonly follows a course of mercury, that several eminent physicians, about the beginning of last century, imagined that mercury had a natural tendency to destroy the fatty particles. The celebrated Van Swieten (§ 147) says, "All the pinguid humours are dissolved by the action of mercury, all the viscid are attenuated, and discharged out of the body, through various outlets, together with the virus adhering to them; therefore, when the patient's body is totally emaciated, &c."

This emaciation has generally been supposed to proceed, partly from the diminished appetite for food, and chiefly from the increased secretions and excretions; but as the observations of Dr. Blackall have proved that the serum of the blood passes off with the urine, it is more than probable that the excessive rapidity of the emaciation is occasioned by that circumstance.

Fourthly,—Debility, with an irritable state of the whole system, accompanies the emaciation, and of course occurs in various degrees in different individuals. The late Mr. Benjamin Bell, whose practical knowledge was so pre-eminent, comprehends in one short paragraph, (page 188, of the second volume of his valuable Treatise on the Lues Venerea,) an emphatic list of those effects of mercury. He remarks, that besides the usual symptoms of fever, "mercury is apt to excite restlessness, anxiety, general debility, and a very distressful irritable state of the whole system.

The consequences of this effect upon the nerves are different upon different subjects. In some, temporary delirium takes place—in others, palsy or epilepsy supervene, and in many the memory and judgment are more or less permanently impaired. Instances, too, have occurred, where sudden death has supervened, apparently in consequence of a very trifling exertion or agitation. Mr. Pearson has well

described such cases under the title of Erethismus. He says, this state "is characterised by great depression of strength, a sense of anxiety about the precordia, irregular action of the heart, frequent sighing, trembling, partial or universal, a small, quick, and sometimes intermitting pulse, occasional vomiting, a pale contracted countenance, a sense of coldness; but the tongue is seldom furred, nor are the vital or natural functions much disordered."

It may be alleged, that these are extreme cases, and it must be admitted, that in many instances, those very violent effects do not follow. Delicate individuals, however, particularly those who have been accustomed to a sedentary life, and, therefore, in an especial degree, females, generally experience, after a course of mercury, various modifications of disordered feelings, communicating the idea of imaginary diseases, which unfit them for the duties of life, and render existence a burden.

Among the anomalous complaints arising from this cause, may be enumerated, impaired or capricious appetite for food, with all the ordinary symptoms of indigestion, particularly retchings in the morning, and flatulency—disturbed sleep, with frightful dreams—impaired or depraved vision—frequent aches and pains in different parts of the body—occasionally such sudden failure of strength, as if just dying, and at other times violent palpitations at the heart, accompanied with difficulty of breathing. Along with all these complaints, there is such a wretchedness of look, with such a propensity to brood over their miserable feelings, that it is extremely difficult to persuade the relations or the attendants of the patient that there is no serious indisposition. Indeed medical practitioners, who are not accustomed to weigh with mature deliberation all the complications of symptoms, are generally deceived in such cases, and involuntarily add to the alarm both of the unhappy sufferer and of the attendants.

"I might cite all writers on the *Materia Medica*," Dr. Falconar, in the paper alluded to, (page 110) says, "for authorities that the long continued and frequent use of mercury is not free from danger; that among other ill effects, it tends to produce tremors and paralysis, and not unfrequently incurable mania. I have myself seen repeatedly, from this cause, a kind of approximation to these maladies, that embittered life to such a degree, with a shocking depression of spirits, and other nervous agitations with which it was accompanied, as to make it more than commonly probable, that many of the suicides, which disgrace our country, were occasioned by the intolerable feelings that result from such a state of the nervous system." To the truth of these remarks every unprejudiced physician who has been in extensive practice must bear testimony.

Such are the ordinary and well known effects of mercury when given in sufficient quantity to act upon the human body,—but in many cases other deviations from health ensue.

Of these, the most common are excessive diarrhœa, accompanied often with discharges of blood from the bowels. This is so apt to occur in some individuals, even though the mercury be administered by being rubbed upon the surface, that every writer upon "*Lues Venerea*" has

mentioned this effect as one of the great obstacles to the cure of the disease.

The random experiments of speculative physicians upon patients labouring under scrofulous affections have proved, that in some cases ulcerations of the soft parts, and caries of the bones, originally arising from ill conditioned states of the system, are much accelerated in their progress by mercurial medicine. Of this many melancholy examples might be cited. A boy about eleven years old had a sore on one cheek, with an affection of the jaw, which were attributed to the mismanagement of a dentist in extracting a carious tooth. A physician was consulted, (after the patient had suffered for some months,) who immediately prescribed a regular and full course of mercury. In a short time ulcerations in the throat appeared, the nose sunk, and one of the eyes was nearly destroyed, while the general health became so seriously injured, that death followed in a few months. Can it be for a moment doubted, that all those morbid changes proceeded from the inflammatory action of the mercury.

Mental derangement, with eventual fatuity, has sometimes followed a course of mercury; and the probable reason why it does not do so more frequently, is, that the irritable state of mind which usually precedes actual derangement, commonly alarms the attendants, and leads to active precautionary measures.

Another consequence of the use of mercury is a very violent affection of the skin originally hinted at by Mr. Benjamin Bell—and more lately particularly described by Dr. Alley of Dublin, Dr. Spens of Edinburgh, and Mr. Pearson of London. It has been styled *hydrargyria* by Dr. Alley, *erythema mercuriale* by Dr. Spens, and *aczema mercuriale* by Mr. Pearson.

This eruption is usually preceded by heat and itching of the skin, a frequent pulse, and a white tongue. Most commonly it begins on the inside of the thighs, or about the flexures of the arms; and Mr. Pearson asserts, that it generally attacks the anterior parts of the body before the posterior. The parts affected are first of a faint red colour, and gradually the shade becomes deeper. The eruption proceeds by slow degrees over the whole surface, accompanied with an evident tumefaction of the skin, with great tenderness and heat, and most troublesome itchings.

Examined by a magnifying glass, the eruption appears distinctly vesicular, though the vesicles are so minute that they cannot be distinguished by the naked eye. These minute vesicles contain at first a pellucid fluid, and are each surrounded by a circular redness. From the great itching they are soon and inevitably ruptured, and discharge a thin acrid fluid, which irritates and excoriates the surface, and aggravates greatly the patient's sufferings. In this way the disease proceeds from one part to another, till the whole person becomes affected.

When the vesicles are first ruptured, the fluid which exudes, though thin, stiffens the linen, but after a few days the discharge becomes thick, and emits a most offensive smell. As the different parts of the body are affected in succession, the exudation is thin in one part, and thick and adhesive in another. In a day or two the adhesive discharge ceases, the cuticle loosens, assuming first a pale brown colour, and then turning

nearly black, when it separates in large flakes, leaving a faint redness on the exposed surface. Sometimes this disquamation is succeeded by a second or third, in the form of white scales, like farinaceous powder. In some cases the hair and even the nails have also separated along with the epidermis.

The duration of the disease varies from a fortnight to eight or ten weeks, or even longer. Dr. Alley has described three varieties, viz. by hydrargyria mitis, simplex febrilis, and maligna; and out of forty-three cases, which he witnessed within ten years, eight patients died. For a more particular account of this loathsome and distressing affection, the reader is referred to Dr. Spens' *Observations*, already quoted, Dr. Alley on *Hydrargyria*, Mr. Pearson, second edition page 166, and Dr. Bateman, page 254.

These morbid effects of mercury do not seem to depend entirely upon the quantity or mode of preparation of that medicine which may be administered to the individual, for while it is an established fact, that the mildest preparations employed externally, if exhibited in too large doses, or continued for too great a length of time, are followed by some of the bad effects above enumerated, it is also notorious, that very small quantities of mercury have suddenly proved equally injurious. Thus, in a lady (whom the author attended some years ago along with his intelligent friend Dr. Farquharson) who had had such small doses of the blue pill, combined with opium, for three nights successively, that the whole quantity amounted to no more than five grains of the mass, salivation began on the fifth day, and notwithstanding every attention, the tongue and gums became swelled to an enormous degree, bleeding ulcers of the mouth and fauces took place, and such excessive irritability and debility followed, that for nearly a whole month her life was in the utmost jeopardy. Every practitioner must have met with similar cases.

Another common consequence of a very small dose of mercury, is an excessive bowel complaint. In many individuals a permanent irritability of the stomach and intestinal canal has followed the accidental exhibition of a few grains of calomel.

Various other anomalous affections have been known to succeed the use of mercury. Thus, Dr. Falconar mentions, (*Memoirs of the Medical Society of London* Vol. III. page 381,) that he once saw a dropsy of the breast produced by the use of a mercurial remedy for a redness in the face, which it effectually removed, but instantly produced a dropsy of the chest, terminating in death. Dr. Blackall has recorded similar cases.

In his observations on the hydrargyria, page 40, Dr. Alley asserts, that he had seen "that eruption appear over the entire body of a boy about seven years old, for whom but three grains of calomel had been prescribed ineffectually as a purgative."

Many other instances of violent effects from a small dose of mercury might be cited. Besides, the following seems to prove, that mercury may remain inert for a considerable time in the habit, and afterwards, by some inexplicable circumstance, may become active.

A lady, the mother of four children, in the twenty-eighth year of her age, had a bad miscarriage at the end of the fourth month. When the author was called, she was very much reduced from the loss of blood,

and required the ordinary palliative remedies. Three days after the first visit she complained of a bad taste in her mouth, with soreness of her gums, and on the following day salivation took place. On inquiring into the circumstances of her previous history, it was learned, that four years before she had had for a fortnight a course of the blue pill, which had only slightly touched the gums, and it was solemnly asserted, that she had never again taken any preparation of mercury, and had been in general in good health.

The salivation was therefore at first attributed to some accidental cause, but when it was found to be proceeding with great violence, the medicines which the lady had been taking for the palliation of the complaints produced by the abortion, were carefully analyzed, from a suspicion that some mercurial preparation might have been mixed with them, but it turned out that they contained no mercury. The most anxious and unremitting attention, and the careful exhibition of all the ordinary remedies which have been employed in similar cases, proved unavailing. The salivation, with the usual consequences of excessive emaciation, debility, and irritability, continued for above twelve months. Occasionally for a day or two it was checked, but alarming vomiting, with threatening sinking of the living powers, supervened.

It is universally acknowledged, that although the morbid effects of mercury may be induced very suddenly, and by very small quantities of the medicine, in certain constitutions, there are no marks by which such peculiarities of habit can be distinguished, and there is no method of arresting their progress.

SECTION II.

THE PERNICIOUS EFFECTS OF MERCURY, IN VARIOUS DISEASES.

In slight cases of indigestion, popular prejudices may perhaps have led practitioners to attribute the most usual symptoms of indigestion to a retention of bile, and to suppose that nothing else than calomel or the blue pill can afford them relief.

Hazardous as it always must be for any individual to oppose popular prejudice, it is incumbent on practitioners, in every instance of serious indisposition, to act according to their own deliberate judgment respecting the nature of the case, and not in compliance with the caprice of the patient. Physicians ought absolutely to refuse sanctioning the use of mercury.

Those who are subject to occasional fits of dyspepsia, particularly those who have resided in hot climates, are accustomed to appeal to their own personal experience, as directly evincing the great utility of calomel in such complaints. But if those persons could attend impartially to the effects of that medicine, they would find, that its immediate operation is severe, and that it is followed for some time by uncomfortable feelings, and by an unusual susceptibility of derangement of the stomach and bowels. Perhaps, indeed, these very effects of calomel

furnish in the majority of cases an antidote to the poison, for they compel the sufferers to adopt restrictions in diet, and other necessary precautions, which the immediate relief that would ensue from the operation of safer medicines might make them suppose to be useless.

Sometimes, it is true, a single dose of calomel seems to remove in a few hours the oppressive feelings produced by indigestion, and this happens from the sudden discharge of the acrid contents of the stomach and duodenum. But a repetition of the same medicine, instead of being equally serviceable, generally aggravates the sufferings, inducing alarming fits of palpitation, or of faintings, or of such unaccountable feelings as lead to the dread of immediate death.

The author can truly affirm, that in several cases to which he has been called, where patients had been under a course of mercury for stomach complaints, the irritable feelings described, were in a much more violent degree than he ever witnessed from the same medicine given in other diseases. Nor is it wonderful that this should happen, since it is well known that one of the most common disorders occasioned by the use of mercury is indigestion.

When symptoms resembling those of dyspepsia arise from organic disease of the stomach, or through sympathy, from tubercles in the lungs, or altered texture of any other part than the liver, it may be much questioned whether any beneficial effects were ever produced by mercury. In almost all the instances of this kind which have fallen under the author's notice, the original affection was hurried on. Scirrhus of the pylorus has been always considered to be quite incurable; and tubercles of the lungs, and affections of the mesenteric glands, which seem by sympathy to produce dyspepsia, are as little under the control of medicine.

The chemical preparations most generally in use as a purgative in this country is the calomel. "It has," as Mr. Carlisle has remarked, "a direct purgative power, as a metallic salt; and it operates powerfully on the large intestines.—It disorders the digestive powers of the stomach; and, in debilitated persons, the frequent employment of it sinks the strength, and provokes hæmorrhoids."

It may be alleged, that in every complaint of infancy and childhood, calomel, within these few years, has been had recourse to, not only by practitioners, but by parents and nurses; a practice which must have long ago been exploded, if bad effects had ensued.

Although a dose of calomel may seem merely to affect the stomach or bowels, it may by its influence upon some latent disorder, such as tubercles in the lungs, or slight enlargements of the mesenteric or other internal glands, give activity to a disease, the source of which might otherwise have been removed by the natural powers of the constitution. The author has for several years been impressed with the conviction of this important truth.

That there are many individuals who have often with impunity taken calomel as a purgative, is not to be denied; but it is equally true, that extremely irritability of the stomach and bowels, ulcerations of the mouth with caries of the teeth, dropsy, epilepsy, and various other modifications of disease, have followed the use of that preparation. In se-

veral cases the author has decidedly ascertained, that ulcerations of the villous coat of the intestines in infants and young children, have been induced by the frequent repetition of doses of that medicine.

Had these injurious effects of calomel upon delicate constitutions been hid from the rest of the profession, and known only to the author, some apology might be offered for the pertinacity with which that medicine is still prescribed; but so far is this from being true, *that it may be confidently asserted, that no medical man of competent knowledge and observation could administer calomel as a purgative, in a hundred instances, without being convinced of its injurious tendency.* Of this innumerable proofs could be cited, but it is sufficient to appeal to the testimony of professor Carlisle and of Dr. Blackall.

Mr. Carlisle has expressed himself very strongly on this subject. "That grave men should violently persist in large doses of calomel, and order these doses to be daily reiterated in chronic and debilitated cases, is passing strange. Men, starting into the exercise of the medical profession, from a cloistered study of books, and from abstract speculations; men wholly unaware of the fallibility of medical evidence, and unversed in the doubtful effects of medicines, may be themselves deluded, and delude others for a time; but when experience has proved their errors, it would be magnanimous, and yet no more than just, to renounce both the opinion and the practice."

Dr. Blackall's remarks being very specific, afford a still more satisfactory proof of the validity of the author's opinions. "It appears to me," he says, "that no accidents proper to the disease can account for all those fatal conversions to the head, which of late years have so frequently taken place in the fevers of children; and I have on some occasions been disposed to attribute them to excessive and repeated doses of calomel, which either not moving the bowels, as was expected, have given evidence of being absorbed, or, on the other hand, have purged too violently, and been succeeded by diarrhoea without bile, and a prostration of strength, from which the little patient has never risen. Its less severe effects are sometimes of no slight importance; a slow and imperfect recovery, a languid feverish habit, and a disposition to scrofula.

"It need not surprise us, that, in children, this disposition, particularly if so excited, should often be formed on the part most liable to every impression, and most actively developing itself, the brain; since, even in adults, mercury is inimical to the nervous system. Parents have something to regret, who are so perpetually giving calomel to their children, without any distinction or care, as a common domestic remedy. And it is difficult to conceive on what view of the subject even practitioners proceed, who indulge in its use with less scruple than ever, with less caution as to management, whilst they are observing and lamenting the daily increasing ravages of hereditary scrofulous disorders. It can hardly be in the present day from want of calomel, that such a taint is propagated."

Small doses of calomel may seem useful in bowel complaints, when in reality the amendment is to be attributed to the regulation of diet,

and to the opiates which are commonly recommended at the same time.*

The author can confidently declare, that he has seen a number of infants, and very young children, destroyed, as he positively apprehends, by the indiscriminate use of calomel for complaints of the bowels.

In dropsies there is either increased activity of the exhalents, or some altered condition of the circulating mass, which renders it acrimonious or stimulating when exhaled, it is perfectly obvious, that all medicines capable of aggravating such causes ought to be most carefully avoided. And since it is clearly established, that preparations of mercury have a direct tendency both to increase the action of the arterial system, and to alter the constituent parts of the blood, they must be regarded as most especially inadmissible.

The author has never met in consultation with any practitioner of discernment and experience, who has not admitted the fact, both that mercury and squills frequently fail to give relief in cases of general dropsy; and also, that in many instances their exhibition has been succeeded by a rapid and mortal aggravation of the symptoms. If any reliance can be placed on the validity of the observations in the preceding pages, the reasons for these failures may be easily comprehended.

Were any further illustrations required, the author could state several distressing cases to which he has been called, even since the publication of Dr. Wells' and Dr. Blackall's valuable hints. The patients alluded to, while under a course of mercury and squills, had been unexpectedly seized with alarming breathlessness, or violent pain in the side, or sudden delirium, with a sharp pulse, for which they had been very properly otherwise treated, while the mercurial medicines had been discontinued. But although a rapid amendment had followed this change of treatment, the use of the mercury had been resumed whenever the alarm had fairly subsided and a hopeless recurrence of all the bad symptoms had ensued.

Although the consideration may be humiliating, it is too instructive to be passed over, that the very reason urged by practitioners of deserved eminence for the employment of mercury in hydrocephalus, are not unfrequently in direct contradiction to their own explanation of the nature of the disease. A late writer on this subject, of high reputation, for example, attributes hydrocephalus acutus to increased action of the arteries, with at the same time venous congestations within the cranium, and recommends mercury for the purpose of substituting a new action. But the most ample proofs, it is presumed, have been brought forward in the preceding pages, to show, that mercury increases the arterial action, that it alters the nature of the circulating mass, and that it impairs the energy of the nervous system, and therefore its operation must tend directly to aggravate those alleged causes.

On this subject the author can express his sentiments with more than usual confidence, having from his earliest years had innumerable opportunities of attending to the effects of mercury in this disease. In no

* This is the case in all diseases.

instance under his observation has that medicine ever proved successful, and he fully agrees with Dr. Blackall in opinion, that on many occasions the injudicious use of that mineral has actually occasioned the disease. To his certain knowledge, affections of the stomach and bowels have been converted into hydrocephalus, by the use of mercury prescribed on the presumption, that the patient already laboured under that disease.

Upon what principle mercury has been so universally employed in all cases of enlarged ovarium, notwithstanding the variety of age, constitution, and state of general health of the individuals affected with it, no satisfactory explanation has hitherto been given.

Analogical reasoning is little in favour of the practice. Hydatids have never been cured by mercury, even when situated in parts of the body where that mineral could exert a ready influence. As to accumulations within the proper coat of the ovary, they are too isolated and unconnected with the absorbent system, to be affected by medicines capable of increasing the actions of the lymphatics.

Far less can experience be pleaded in justification of this practice, for the author speaks within bounds, when he avers, that he has known mercury employed in some hundred cases of diseased ovarium, without its having proved useful in a single instance. A few apparent exceptions have been reported to him by old pupils; but from the uniform result of all the cases which have been under his own notice, he is induced to believe, that in those alleged exceptions, the disease had not been the enlargement of the ovary.

But while mercury can be of no utility whatever, it may, and certainly often has produced irreparable injury, not only upon the general constitution, but also in all cases where indurations of portions of the ovary are complicated with serious collections. Instances of this kind every now and then occur, and cannot be distinguished till their progress towards cancerous ulceration be so far advanced as to become manifest. A most impartial attention to many of those cases has convinced the author, that indurations, which might have remained for years without inconvenience to the patient, have been forced into morbid activity by a course of mercury.

In some parts, calomel has been employed for many years, as the chief remedy in croup, and it had been repeatedly prescribed in this city, by medical men who had practised in the West-Indies, before the author could be persuaded to sanction its use. He was informed that the method of exhibiting it, was to give to a child of three or four years old, five grains evening and morning, and that it cured the disease without producing any sensible operation. Such an account held out no inducement for trying so hazardous a remedy, more especially since he knew that the practice, under the direction of the late Dr. Wright, and some other physicians, who had resided in hot climates, proved so unsuccessful, that on more than one occasion, two children in the same family, treated according to this plan, died within a few days of each other.

About sixteen years ago, however, in consequence partly of the urgent representations of an old pupil, (the late Dr. J. Anderson,) and

chiefly because the ordinary remedies frequently proved uncertain, he was induced to give calomel a fair trial; and he can solemnly assert, that according to all that he has seen, no relief whatever has been afforded by that medicine, unless copious dark green coloured stools, like boiled spinnage have been discharged, and that it requires large and repeated doses of the medicine to produce that effect. For example, to a child of seven years old, one hundred and thirty-three grains were given within sixty hours.

In reasoning upon this subject, it is extremely difficult to explain, in the first place, the safety with which a hundred and thirty-three grains of calomel could be given in this climate, within sixty hours, to a patient of seven years of age.

It has been shown, that the action of mercury tends, by exciting inflammation and effusion, to produce thickening of various membranes, particularly of the pleura—and several instances of that kind are recorded by Dr. Blackall, where the fact was proved by the appearances on dissection. This effect of mercury has been long remarked by the author, and it suggested to him, many years ago, a practical inference of some importance.

Many practitioners imagine that mercury is a specific in the *venereal disease*. But this is not the case. Indeed it is very questionable whether it has any other than a deleterious effect in this disorder.

This remark is exemplified in the experiments lately made in England by the head surgeon to the army. It is stated, that about two thousand patients were cured without mercury, simply by abstinence and rest, or rather by the natural efforts of the constitution; whereas, no more were cured by mercury. Thus it is evident, that that mineral exerts no influence in the removal of syphilis, and that physicians impute to art, or rather to a dangerous medicine, what is due to nature.

When we reflect that in fevers mercury is given with little scruple, we are led to remark, that “within the last thirty years either a sudden revolution in the laws of the human machine had taken place, or that medical men had ceased to reason on the operations of medicine.”

Every practitioner who has paid the least attention to the effect of mercury in fevers, must be convinced of its immediate and subsequent injurious effects. No further proof need be adduced than is found in the preceding pages; it is shown, that it produces an augmentation of feverish and inflammatory symptoms; that from the time that the influence of mercury becomes evident, the general strength declines rapidly, a dangerous emaciation, debility, with an irritable state of the whole system, also paralysis, epilepsy, loss of senses, and many other distressing and dangerous complaints.

Who then in the possession of his reason would think of exhibiting mercury in fevers. But, strange as it may appear, it is universally administered, and constitutes the chief medicine in the *materia medica*. We hope, however, that those who see its pernicious and fatal effects portrayed in this work, will in future flee from it as from the face of the most poisonous serpent. It would require years to give an account of the number of deaths it has occasioned.

SECTION III.

ON THE MERCURIAL DISEASE, BY DR. A. MATHIAS.

THE mercurial disease will be found to attack the bones, the periosteum, the tendons, the tendinous fascia, and in the joints, the cartilages and the ligaments, by the extension of the specific diseased action, and not merely by the spreading of a mercurial ulcer in the neighbourhood; for indeed it very seldom happens that the mercurial disease discovers itself in them in a state of ulceration.

If what I have now observed be true, the extent of the mercurial disease is rather greater than that of the venereal. When any of these parts take on the mercurial disease, the irritation must always be considered as a general and not as a local affection; except the complaint commenced there locally in a venereal ulceration. The irritation will commonly discover itself by pain, by tumour, and by inflammation, and very often without there having been any one previous symptom of the lues venerea. It is however by these symptoms commencing during a course of mercury, and resisting all the efforts made by that medicine to cure them, that we are led to believe that they entirely depend on the mercurial specific irritation.

The appearance of the mercurial disease in these parts so much resembles the venereal disease, that we must always take into consideration the quantity, the quality, and the effects of the mercury which was previously given, to enable us to form a right judgment of these cases. The symptoms, however, are not so absolutely alike in both diseases that there are no shades of difference: the symptoms, for instance, whether of pain, of tumour, or of sore, possess the moveable fluctuating disposition which I have so often mentioned, when speaking of this disease in the groin and in the throat.

The mercurial disease in the bones mostly extends no further than in producing a pain in them. This occurs many times strictly in those parts which are commonly affected by the venereal virus, and these pains will come on principally at night; but in many cases the disease will extend to the joints of both extremities and even to the smaller joints. The hip joint has sometimes been the seat of this disease, a circumstance which we shall find described very accurately by Mr. John Howard in his work on the venereal disease.

The bones of the head are often the seat of the mercurial irritation, and the patient is subject to violent head-aches. These pains, in many cases are as troublesome during the day as in the night, but they shift very frequently from one part to another, last for a week or two, disappear, and then return again. The patients sometimes supposed them to be a rheumatic affection.

The mercurial irritation occasionally proceeds to such an extent in the bones as to produce an affection of them resembling the disease called the mollities ossium, in which the bones are liable to fracture on every trifling accident. Mr. John Howard makes mention of this affection. and he concludes that there is then an absorption in part of the

earthly matter of the bones; a circumstance not unlikely to take place when the mercurial irritation is very violent in these parts. The teeth will often drop out from the destruction of the gums, and an absorption takes place of their alveolar processes from this same cause. The venereal virus, most certainly, at times also renders the bones very friable, but it generally first makes them carious. This is not the case with mercury, when it produces the kind of disease which I have just observed.

Few bones in the body are exempt from the possibility of a venereal infection, and, as far as my observations have reached, I may assert that the mercurial irritation is equally as extensive in its effects.

When the bones and cartilages of the nose are affected by the venereal virus, the complaint is then called a venereal ozæna; and, from the spongy and delicate structure of these bones, the mischief done by it is often sudden and irreparable. The mercurial ozæna is likewise a complaint not unfrequent. I have seen some cases of it, and have observed that its effects are as mischievous and as sudden as those of the venereal ozæna. I have known the mercurial ozæna to commence in a case of the mercurial ulcerated throat, when there had not been the least appearance of a venereal ulcer in the part.

Perhaps in no instance is it of more importance, than in this state of the disease, to distinguish accurately and speedily, when the case is doubtful, on what specific irritation it depends. I have seen the bones of the palate, the scheiderian membrane, the cartilages and bones of the nose, all confounded in one diseased mass. I have also seen several cases of the mercurial disease from hot climates, in which the complaint has first commenced in the nose, and, after having produced considerable destruction there, the ulcerative process has crept up on each side of the superior maxillary bones, through the cheeks, in an irregular angular direction, till at last the miserable patients have found in their deaths the only remedy for their unhappy sufferings. Some of these cases have been accounted incurable instances of the *lues venerea*; and others have been called the *lues venerea* terminating in cancer; when, from their whole history, I had little doubt of their having been first venereal, and then finally and truly mercurial. In many of them I had opportunities of observing the moveable disposition of the ulceration, which is so characteristic of the mercurial affection.

Mercury appears to destroy the energy of the nervous system, producing weakness, tremors, palseys, fatuity, epilepsy, and mania, the most dreadful of all its bad consequences; and indeed no part of the body is exempt from its deleterious effects. The patient becomes hectic, has a small quick pulse, and there is often a tendency to a colliquation on the skin and howels, and a wasting atrophy of the flesh; his countenance is pale and wan, his nights bad, his appetite impaired, his strength much reduced, and he complains of general irritability, with head-ache and flying pains in his bones, especially on the approach of bad weather, of rain, of frost, or of north-easterly winds.

SECTION IV.

CALOMEL OR MERCURY....BY DR. ANTHONY HUNN, OF KENTUCKY.

This is the æra of *calomel*. The present medical practice might well dispense with every other drug beside it. I own the calomel practice is both cheap and easy to the physician; for the whole extent of both theory and practice is, give *calomel*. If that will not help, give *more calomel*, and if that again proves abortive, double, treble the doses of *calomel*. If the patient recovers, "*calomel* has cured him:" if he dies, "nothing on earth could have saved him." The reader will conclude, that medical schools and academies, with the head-aching studies of anatomy, physiology, botany, pharmacology, chymistry, have been laid prostrate by this giant, *calomel*. Half a day's, nay, in a genius, half an hour's study will initiate any lady or gentleman in all the mysteries of the Æsculapian art, and the "*aurea praxis*," might swell the account of a modern Galenus to one dollar at the expense of twelve and a half cents. This is certainly for the doctor a "consummation devoutly to be wished." But there is a heavy draw-back on our joy, which the fable of the "boys and the frogs," so ingeniously pourtrays: "*what is joy to you, is death to us*," said the expiring frogs. I expect to show to my impartial reader, that the present calomel practice in fevers, is a calamity in its ravages co-extensive with the empire of civilization, and that war, with all its ghastly concomitants, must hail calomel their master.

The *proper* effects of mercury on the human frame, are First, *Fever*, as I have before defined it. Second, It is the cause of a peculiar action on the lymphatic vessels. Third, It chymically decomposes the fluids, and peculiarly the lymph. This is, in my opinion, the true cause of the fetid breath in salivation. Fourth, In constitutions prone to that effect, or under circumstances favouring it, or when too long used, it produces *mortifying ulcers* of a specific kind, which hitherto have proved absolutely incurable. Its accidental effects are, First, Salivation, which may also be produced by other drugs and sometimes appear spontaneously, and which is not at all necessary to effect a cure. Second, In a state of great visceral irritability, or when given in large doses, it proves a sickening and powerful purgative, with a singular sympathetic affection of the liver, which viscus is thereby thrown into a morbid convulsive action, creating bile, exorbitant in quantity and poisonous in quality; when in a healthy state the bilious secretion is mild, moderate in quantity, and salutary.

Now, it appears to be a law in animaliation, that two distinct fever causes cannot operate at the same time on the system. Thus, for instance, if the infection of the measles lodge in the body, when a patient is inoculated for the small pox, the latter will lay inactive, till the first has run through its course. This law, I apprehend, has first introduced mercury into the fever practice, and it is a fact, if the *proper* mercurial action can be produced, the fever produced by a miasma will speedily cease. But my reader will please to observe, First, That in all fever

cases it is extremely precarious and doubtful to produce this proper mercurial action, and there are many cases, in which it cannot be induced at all. Besides that, when induced, it is unmanageable. Second, If the bowels are very irritable and weak or in peculiar habits, it will operate as a purge and throw the liver into bile, creating convulsions, like a blister-plaster on the very liver. It will attract more or less of the febrile impetus upon that vital viscus, producing a dangerous inequality, which is called "bilious fever." Third, After a vast quantity of mercury has been introduced into the system, which for want of sufficient excitability, has lain dormant; if now, by a sudden increase of that excitability or from other unknown causes, it evinces its presence by salivation, this will be of course, enormous and distressing. The teeth, valuable instruments of our most substantial enjoyments, become loose and rot, perhaps fall out: or, worse still, the upper and lower jaw bones exfoliate and rot out sometimes, as I have witnessed in the form of horse shoes: parts of the tongue and palate are frequently lost, and the poor object of commiseration lingers out a doleful existence, during life. A tremendous description this, indeed; yet this happens when mercury performs a cure. In our summer and fall fever, the pestilential bilious symptoms occasioned or aggravated by it, carry the patient speedily off in inexpressible torments, and spread the multiplied miasma among the mourning family, the unwary bystanders and mourners!

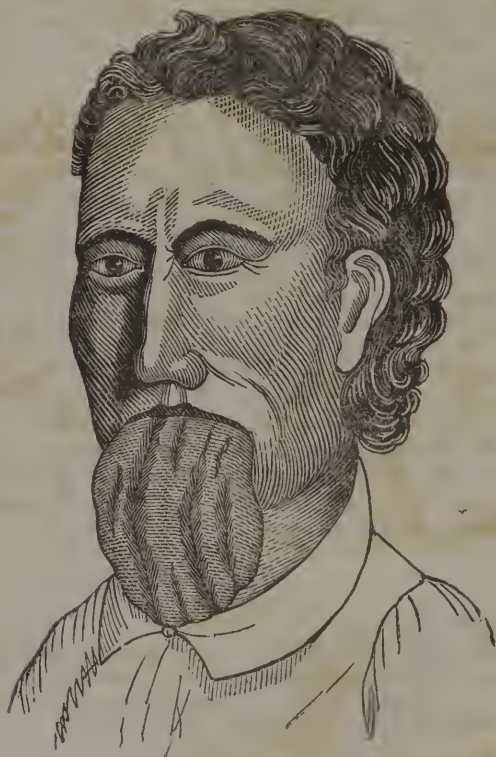
Is there any of my readers who would not by this time pray, "deliver us from calomel?" Yes, my fellow citizens, you can be, the world will be delivered from it! Only drive away prejudice, that black thunder-cloud, which ever hovers over truth; think for yourselves, free as republicans ever should think; consult your precious healths and lives. Every free man should, at least to a certain degree, be his own lawyer, his own preacher, his own *physician*. My method of cure in fever is entirely without mercury and its doleful effects. Were I even not more successful than those gentlemen of the medical profession, who trust so much to the virtues of calomel, still the gain would be immense; but from facts, enumerated fairly by myself and others, I have nothing to fear from an impartial comparison.

SECTION V.

The Statement of Dr. Richard Reese, of London, member of the Royal College of Surgeons, author of the "Dictionary of Popular Medicine," "Chemical Guide," corresponding member of the Society of Practical Medicine of Paris, &c. &c. &c.

The charter of the 'Royal College of Physicians' is found to contain a singular license, which is, a permission to any one and every one to practice the healing art by the use of *herbs only*. Now we really do consider this as ample a permission as any man would require, for poor must be the resources of that physician's mind, and very narrow his knowledge of medical botany, who could not from the vegetable

kingdom alone cure most of the diseases of the human frame: even the specific of mercury, if we were driven to the necessity of a substitute, might probably be rivalled in some of these productions of nature. We know not whether we have most reason to hail the discovery of mercury as a blessing, or regard it as a curse, since the diseases it entails are as numerous as those which it cures. Our best informed dentists declare, that they can clearly witness the progress of the use of mercury, in the increasing diseases and decay of the teeth. There are serious objections also to other articles of the metallic world; antimony, iron, and arsenic, are dangerous remedies in the hands of the ignorant, and mankind, perhaps, in the aggregate, would be benefitted by their expulsion from medical practice."



SECTION VI.

PLATE, SHIEWING THE EFFECTS OF MERCURY OR CALOMEL UPON
THE SYSTEM.

The above figure represents the appearance and state of Mr. William W——, 47 Oak-street, of this city, in consequence of submitting to

the treatment pursued and recommended, by physicians and authors of the day. He had felt occasionally a little pain in his side, and requested a doctor to prescribe for it. He did so, and in a few days, his tongue became enormously swelled, and sore, and soon protruded out of his mouth, as appears in the figure. It cracked or burst open in four places, from which, as well as from his mouth, issued matter, blood, and water. The doctors, in consultation, concluded to operate upon his tongue, by making incisions or opening it. This, however, was objected to; his jaws were also enormously swelled, and for ten days he ate nothing. One hundred and fifty-six leeches were applied to his tongue, and four quarts of blood were extracted from it.

His tongue was thus protruded for the space of two weeks, or more, during which time he was obliged to make his wishes known by writing. His recovery was considered very doubtful. He, however, employed another class of physicians, who by pursuing an opposite mode of practice, (vegetable instead of mineral) soon counteracted the effects of the poison, by the application of poultices, &c. and the man is now well, and ready to attest to the truth of this statement. This is by no means an uncommon case. It occurs often, and even worse consequences, sooner or later follow the use of mercury and other poisonous metals, now so generally prescribed for every complaint.

I am now attending a woman nearly destroyed by taking mercury for the prevailing influenza. Her whole system has been excessively swollen, almost unable to swallow; her tongue, gums, throat, and jaws, swollen and sore; her breath so fetid that it was almost impossible to stay in the room; flesh almost wasted away; countenance sunk, pale, and ghastly; excessive debility; water running from the mouth; appetite gone; and from the putrid state of the fluids, every appearance of mortification and death. When the physician was first told of the mischief he had done, he made no apology for the treatment, but immediately began to converse upon another subject. The son of this woman again called his attention to his mother, but he was inexorable. Alas! he had followed the books of the day, and this was sufficient to excuse his conscience! This man was not one of the lowest grade of common physicians, by which some of the faculty might excuse the matter, but a no less personage than one of the physicians of the New-York Hospital.

SECTION VII.

MINERALS GENERALLY.

In concluding this Chapter, I will merely hint at the dangerous effects of most of the other minerals used for medicine, which I extract from an article I wrote some time ago, in reply to an attack made upon our practice by a physician of this city.

Mercury.

The principal mineral now used internally to "heal all the ills to which our flesh is heir," is mercury. It is called the *Samson* of

the *Materia Medica*, and so it appears to be; for if Samson slayed his thousands, this mineral poison has slayed its tens of thousands. It is a matter of profound astonishment to me, that any article, productive of such deleterious effects, should be so highly extolled by the faculty, and be so universally used. It seems that modern not botanical physicians, are the genuine descendants of that celebrated empiric, Paracelsus, who first discovered and made use of it. For many centuries previous, Galen taught and practiced the vegetable system of medicine for which we now contend. Many authors of distinguished reputation, have raised their warning voice against the use and abuse of mercury, while others equally celebrated have proved by experiments on thousands, that it is a very dangerous article; yet it is still administered for nearly every complaint.

Muriate of Mercury.

Muriate of mercury, says a writer, is one of the most violent poisons with which we are acquainted.

Zinc.

Zinc is the next mineral extolled by the writer as a suitable article for medicine. The following definition may be given of it: Zinc is a metal which exerts a powerful and very dangerous effect upon the system, especially if an over dose is taken.

Antimony.

Antimony, says Hooper, is a medicine of the greatest power of any known substance; a quantity too minute to be sensible in the most delicate balance, is capable of producing violent effects, if taken dissolved, or in a soluble state.

Arsenic.

It is stated by the same writer, that arsenic is one of the most sudden and violent poisons we are acquainted with. When the quantity is so small as not to prove fatal, tremors, paralysis and lingering hectic succeed. We are on the combined testimony of many medical practitioners, conspicuous for their professional zeal and integrity, irresistibly induced to declare our opinion, at least, against the internal use of this active and dangerous medicine.

Iodine.

It is stated in Hooper's Medical Lexicon, that iodine whenever it is administered, an over dose must be avoided, as it acts with extreme and dangerous effects on the constitution.

Metals Generally.

The attention of the reader is particularly directed to the following testimony of the same author:

☞ “All the metallic preparations are uncertain, as it depends entirely on the state of the stomach, whether they have no action at all, or operate with dangerous violence.”

CHAPTER IV.

BLOOD-LETTING.

If the employment of the Lancet was abolished altogether, it would perhaps save annually a greater number of lives than in any one year the sword has ever destroyed.

DR. REID.

SECTION I.

AMONG the various means made use of to restore the sick to health, there is none so irrational and absurd as blood-letting. It is, at present, considered almost as a universal remedy, and resorted to for the cure of the slightest indisposition; and, although daily slaying its thousands, it still continues to be the main pillar of the profession. Indeed, were bleeding and mercury to be altogether prohibited, many physicians would find themselves in a sad dilemma; for their hands would be completely tied.

We are unable to determine precisely the commencement of this pernicious custom, but we find it to be very ancient; having been, it appears, commensurate with the declension of the healing art in the earliest ages of the world. It was not however carried to such an extent, till after the discovery of the circulation of the blood by Harvey. It was at this period that the whole faculty began their mad career, in committing the most wanton violation of the laws of nature. Those who were so unfortunate as to fall victims to disease, were doomed to suffer the most extravagant effusion of blood, and the poor sufferers were soon hurried to an untimely grave, *secundum artem*; even the guillotine of France scarcely surpassed this *systematic murdering*. But in process of time practitioners began to witness the mischief they were committing, which, in some measure, damped their ardour in these bloody scenes. This check induced one physician to remark, that *the proportionate disuse of the lancet was one of the greatest improvements in modern medicine*. We find, however, that blood-letting has been practised for many centuries almost with the same infatuation; and, lamentable for mankind, in the present day, it is regarded as the most powerful weapon to subdue disease. There are few maladies in which it is not recommended. In pleurisy, and all inflammatory complaints, an astonishing quantity of blood is drawn from the system. It is very common to take from five to seven pounds in twenty-four hours. One of the professors in the medical college of this city stated that he had frequently bled his patients to the amount of two hundred ounces in three days. Another professor declared that he had taken three hundred ounces in the short space of three days, and for proof of this fact, appealed

to one of his students. The effect of this practice I shall leave for people of common sense to determine. How much is it to be regretted that such an awful scourge of humanity should exist! A little examination into the consequences of blood-letting, will prove that so far from its being beneficial, it is productive of the most serious and fatal effects.

Nature has endowed the animal frame with the power of preparing, from proper aliment, a certain quantity of blood. This vital fluid, subservient to nutrition, is, by the amazing structure of the heart and blood vessels, circulated through the different parts of the system. A certain natural balance between what is taken in, and what passes off by the several outlets of the body, is, in a state of health, regularly preserved. When this balance, so essential to life, is, contrary to the laws of the animal constitution, interrupted, either a deviation from a sound state is immediately perceived, or health, from that moment, is rendered precarious. Blood-letting tends artificially to destroy that natural balance in the constitution. Nature, deprived of a quantity of the circulating fluid, being fitted with means for repairing the loss she has sustained, begins immediately to repair it. The secretions and excretions in general are diminished; the appetite is increased; and, for a short time, the process of nutrition is unusually quick.

Thus, by the wisdom of Providence, nature soon restores to the constitution what art had taken from it.* The consequences, therefore, of having been once bled are rarely considerable. This single operation, however, is an imprudent violation of nature, and of common sense.

But too often the practice has not rested here. For various are the incidents which favour the repetition of blood-letting. The patient, if addicted to an easy, indolent, luxurious way of life, may find himself, after the evacuation, sensible of some present ease. The system, being before too full of blood, or rather the balance being lost, enjoys a short respite from its usual oppression. Or, after the bleeding, though it was improper, and tended rather to increase the disease, yet the hope of relief, or a change of weather, the benefit of exercise and country air, or some other alteration in an accustomed manner of living, may, by palliating or removing the complaint, prejudice the patient in favour of the lancet. The disorder, it may be, was of such a kind as really to admit of alleviation from the use of bleeding; but, nevertheless, the remedy unhappily proves of worse effect to the constitution than the disease itself would have done, though entirely left to nature. Great numbers of people who have been relieved by bleeding, are apt to be partial to the means of their own recovery, and to become strenuous advocates for its use, even in cases by no means similar to their own.

These, and a variety of other accidental causes, often persuade to repetitions of blood-letting. The consequences now become more serious. The constitution, though it did not suffer materially from one

* It very frequently happens, however, that in many habits, the loss of even small quantities of blood, induces such a debility as to prevent a reaction of the system, whereby the blood becomes thin and watery, dropsical and other diseases follow, and very commonly death itself.

bleeding, yet far from being able to undergo with impunity repeated operations of a similar kind, turns against itself those powers which were given for its preservation, and co-operates with the imprudent use of the lancet in promoting the accomplishment of its own destruction. For now the constitution not only repairs the losses of blood it sustains, but, if the common intervals of time be interposed, makes more blood than is naturally required for the purposes of health and life, it may be able to bear such repeated evacuations.

Thus the habit of blood-letting is established. But, in fact, habitual blood-letting augments the very evil it was intended to remove. For sanguine evacuations necessitating the constitution to make more blood than is requisite, produces too great fulness of the system. The balance between what is taken into the body, and what passes off by its several outlets, is no longer maintained. As the disposition to plethora exists, plethora itself, if the person continue to live in his accustomed manner, will undoubtedly prevail, except at that time when the constitution has just received the unnatural assistance of the lancet. The habit of letting blood increases and becomes stronger by repetition. In this state, the constitution, in spite of human art, will at times labour under various degrees of plethora, till the vessels arrive at that point of fulness, which again creates the necessity of bleeding. Though some constitutions are so robust, or so peculiarly framed by nature, as to bear such treatment without any evident bad consequences, yet this is but the privilege of few. Many will severely suffer, though they themselves may often be the first to extol in the highest terms of praise that very remedy which has proved so pernicious to their own constitutions. They have been bled till stated bleedings become necessary, not only for the support of health, but even for the preservation of their lives. They have injudiciously created to themselves the necessity of bleeding, and are even happy to find that it relieves complaints, which it at first tended to conduce, and afterward to confirm.

The effects of plethora are many and dangerous. A slight degree of it often produces strange commotions in weak and irritable habits. No person who depends for the preservation of his health on an artificial discharge of blood, can ever be pronounced out of danger. Before the usual means of relief be employed, the sanguine fulness at one time or another may have proceeded to a morbid, or even to a fatal length. The anticipation of the stated bleedings may with the greatest inconvenience lessen, but it can never remove the danger. An increase of fatness, unnatural heat, torpor, inactivity, and a sense of lassitude are common effects of plethora. The whole vascular system is unnaturally put upon the stretch, and along with it, the nervous and muscular fibres. Thus by slow degrees, the tone of the body, in consequence of so considerable an over-distension, is in danger of being destroyed. The constitution itself, in proportion to its native vigour, is rendered liable, exclusive of every other cause of disease, to break many years sooner than it might otherwise have done in the common course of nature, if nature's laws had not been wantonly violated, or presumptuously despised. Hence old age sets in at an earlier season, and becomes afflicted with heavier infirmities. Frequently the appetite fails, the powers of

digestion and nutrition are impaired, the body shrinks, the mind becomes dejected, the stomach and bowels are disordered, sleep is interrupted and unrefreshing, and in short, the whole constitution fundamentally shaken and debilitated.

These are the flow and the frequent consequences of bleeding. Others in fact occur, which, though on the whole they are perhaps less destructive, are however more painful, and better distinguished.

Too great a fulness of blood predisposes the constitution to a world of disorders. Inflammatory fever, and external inflammation, the phrensy, the pleurisy and the quinsy, rheumatism, hæmorrhage, &c. are frequently the disorders of a sanguine habit, depending greatly on the plethoric state. Physicians likewise are perfectly agreed, that too great a quantity of blood, increasing irritability, has a strong tendency to excite, in habits where the predisposition to such disorders exists, convulsions, St. Vitus' dance, epilepsy, and hysteric fits; complaints which otherwise might never have made their appearance. We may further add, pains of the head, vertigo, night-mare, often the forerunners of apoplexy and palsy, which are justly ranked among the unhappy effects of plethora. Habitual blood-letting tends indeed particularly to bring on apoplectic and paralytic complaints. The morbid habit, acquiring strength by repetition, produces its fullest and most trying effects in advanced age, when venous plethora occurs; and when the veins of the head, in old people, are particularly subject to rupture, and the consequent effusion of blood, far the most frequent and fatal cause of apoplexy.

Thus much, by way of example, to show the injurious effects of bleeding. It has been proved, that habitual artificial discharges of blood, instead of diminishing, tend to produce plethora; the pernicious consequences of which, on the human constitution, have been briefly enumerated.

Some may object to this reasoning, that, in many instances of habitual blood-letting, the effects here mentioned have not followed; and that, where they have other causes more powerful, have principally produced them. We answer, that such argument is inconclusive in itself, and foreign to the present subject. Not uncommonly the slighter effects of blood-letting are inaccurately overlooked, or ignorantly neglected. But, where that is not the case, it may be observed, that particular causes of disease, when not alone completely efficient, are often applied without inducing any morbid effect. Hard would be the fate of mankind, were every species of contagion to infect every person to which it might be applied. To argue, that habitual bleedings are no cause of apoplexy, because apoplexy is not constantly induced, is just as rational as to deny the very power of a pestilential contagion, because it has been applied to thousands without exciting the pestilential fever. To produce a disease, two particulars in general are requisite; first, the predisposition of the body; secondly, the application of the exciting cause. Without the predisposition we are often exposed with impunity to otherwise very active causes of disease; and, without the application of the cause, the predisposition may continue with us through life without inconvenience. With regard to the latter part of the objection, that other cases, more powerful, acting in conjunction with habitual blood-letting, may probably have produ-

ced the effects which have been enumerated, it is evidently foreign to the purpose. We grant that full living, and the neglect of exercise, may very powerfully assist in exciting the consequences of plethora. It is believed too, that there are men who would rather submit to be bled even once a month, with the privilege, in the mean time, of indulging their vitiated appetite at large, and of enjoying the pleasures of ease, than by living a temperate active life, possess the most perfect state of health, the free gift of heaven, independent of the assistance of art. Yet the argument, just advanced, appears still decisive, that habitual blood-letting often produces a sanguine fulness of the vascular system, liable to be followed with pernicious effects, and is therefore, absurd, and highly detrimental to health.

The following are the observations of the surgeon of the western regiment of Kentish militia, England, on the effects of blood-letting. They plainly prove the inutility and absurdity of bleeding for the "cure of any disease with which we are acquainted." His language ought to be written in letters of gold. He remarks,

I have been upwards of six years surgeon of the western regiment of Kentish militia, during which time our number of sick has never been inconsiderable; whereby much opportunity of practice has been afforded me. I have been in the habit of keeping a journal of the different cases as they occurred, wherein I carefully noted every symptom of which the patient complained, the various remedies exhibited, the time when, and with what view given. I also marked every change that took place in the course of a disease, and the effect of the medicine made use of; and lastly, my own opinion of the method of cure which I adopted. In the course of my practice, I have endeavoured, on every occasion, to determine the justness of preconceived theories by experience, and on every subject to think for myself, uninfluenced by the tenets of schools, or the opinions of others. The prevalence of any mode of practice is certainly not a clear proof of its being useful, nor is it a sufficient recommendation that it may be practised with safety. If it is not evidently beneficial it ought to be laid aside. In this light, I consider the custom of bleeding, as a means of cure, in febrile and other diseases, which I have no hesitation in asserting, is not necessary in any complaint with which we are acquainted. If we grant that *any deviation from the healthy state denotes debility, either general or partial*, surely whatever has a tendency to debilitate further, it is reasonable to suppose, ought to be carefully avoided. It certainly cannot be denied that in every disease wherein bleeding has been used, complete recovery has been protracted, owing to the debility thereby occasioned. We are directed to use blood-letting to lessen irritability, to take off the *phlogistic diathesis*, to deplete the blood vessels, and to prevent inflammation. I know by experience that these indications can be fulfilled much better with less danger by other means. Though the ill effects of the loss of blood, unless excessive, are seldom perceivable in youth, and yet they rarely fail of being felt before the age of forty-five. People who have been often bled when young, about this period of life, begin to be afflicted with chronic pains. They recover very slowly from fits of illness, and are very liable to febrile paroxysms, and a variety of other

disorders. I have rarely been deceived in my conjectures respecting patients of this description, when I have met with them. The cases mentioned by Dr. Denman, shows that it does not prevent inflammation or abortion; nor is it proved that by taking away blood we lessen the diameter of the blood vessels, as we find that six ounces from a large orifice has a greater effect than twenty from a small one.

SECTION II.

DR. VAUGHAN'S CASE OF DEATH OCCASIONED BY BLEEDING.—FROM THE LONDON MEDICAL AND PHYSICAL JOURNAL.

Mr. Charles Green, saddler, in North Fleet-street, a man about thirty-five years old, athletic and convivial, was bled on Sunday in the arm. The wound in the vein was very large, and the discharge of blood from it was profuse, quick, and difficult to be stopped. When stopped, however, the arm was kept quiet, and no pain was felt in it all the next day, nor indeed till Tuesday evening. At this time a pain was felt at the wound, particularly below, extending from it as high as the middle of the arm. The pain increasing, Mr. Green soon began to experience some pain in the head, and some confusion of thought, which, together with extreme anxiety, restlessness, shortness of breath, and frequent rigours, made him declare to his wife his apprehension that his having been bled would presently cost him his life. A surgeon was sent for on Wednesday. On Friday, by twelve o'clock, when I saw Mr. Green again, the tumour of his arm had totally subsided, and there were evident marks of inflammation from the bend of the arm to the axilla. But alas! though Mr. Jones had, in my absence, applied sinapisms to the feet with a view to relieve the head, yet the disease which had a regular time of appearing and ending, went on with such celerity and increase, that Mr. Green died this very day (Friday) in less than three hours after I left him.

Dr. John Pully's Observations on the Effects of Bleeding, in relation to the above case.

There are evil symptoms following the use of the lancet not depending on the action of any morbid poison; not resting on the unscientific conduct of the operation; but owing their appearance to a peculiarity (call it irritability if you please) of constitution. Sometimes an abscess forms in a cellular membrane around the puncture from the lancet, which commonly approaches to the size of a walnut; and, if the habit be very bad, the inflammation will extend far around, and a considerable sloughing of the parts may be the consequence; insomuch as to render the removal of the limb a matter of necessity. And even after amputation, the stump will, in all probability, assume the like disposition to slough. In either case the symptoms of irritation may be great enough to destroy life. When the vein is disposed to inflammation, much pain is felt after bleeding, and shortly around the punctured part appears a redness

and swelling, which soon extends along the arm both above and below the elbow. The arm feels knotty, and pain is given on the touch. The inflammation and swelling sometimes extend to the breast. The accompanying symptoms of irritation are always great; sometimes producing delirium, and even the death of the patient. It is said that horses after bleeding are not unfrequently attacked with this affection of the brain. On dissection pus has been found in the vein, and even in the heart. It has been imagined that the inflammation has been induced by the external orifice not being effectually closed. But this idea is by no means correct.

SECTION III.

BLEEDING IN PLEURISY.—FROM THE MEDICAL REFORMER.

I am perfectly satisfied that there is no necessity of bleeding scarcely in any case. A few days ago I was called to a patient labouring under a violent attack of the pleurisy. Almost every practitioner, however averse to blood-letting in general, recommends it in this disease. As soon as I examined the person, he requested me to bleed him, and give a dose of mercury and rhubarb, as a certain physician always was in the custom of doing in this complaint. I intimated to him that nothing was more common than for physicians to disagree, and hoped that he would abide by my directions. I, in the first place, ordered a decoction, which produced a most copious perspiration. This was about four o'clock, P.M. Early the next morning a vegetable purgative was administered. I called to see him on the same day about twelve o'clock, when I found the inflammation and cough had subsided; the pain in his side, which was very acute, entirely gone, and all the symptoms of the disorder, which was violent in the extreme, (inasmuch that his friends despaired of his life) abated. I asked him how he felt? He answered, I am well. In the morning he was not able to articulate a single sentence. Had this person been treated according to the present system of depletion, and had his constitution been vigorous enough to have resisted the force of his disorder, together with the dangerous treatment, he must, in all probability, have been confined to his bed for the space of three months; instead of which, in four days he was able to attend to his ordinary business. Did physicians know the number of people killed by bleeding, I am persuaded they would abolish such an irrational practice. It always endangers the life of a person, and never fails to aggravate his disorder; and if so fortunate as to recover, he experiences a train of evil consequences through life.

The blood is properly called the *vital fluid*, and the life of a person is said to be in the blood. We know that just in proportion to the loss of this substance is our vigour and strength taken from us. When taken from the system by accident, or the lancet, it is succeeded by great prostration of strength, and a derangement of all the functions of the body. These effects are invariably, in a greater or less degree, consequent on bleeding. Is it not then reasonable to

suppose, that what will debilitate the strongest constitution in a state of health, will be attended with the most serious evils, when applied to a person labouring under any malady? Is it not like throwing spirits on a fire to extinguish it? But, says one, we must deplete the system, empty the blood vessels, and take away the strength to arrest the disorder. In other words, we must make the patient worse, before we can make him better.

This argument shows how ignorant medical men are of the animal economy, and the indications, and cure of diseases. No system could be invented, better calculated to counteract the healthy efforts of nature. Bleeding is immediately resorted to in all inflammatory complaints. Did practitioners know the nature and design of inflammation, their treatment would be different. In fever, it is produced by an increased action of the heart and arteries to expel acrid and noxious humours, and should be promoted until the irritating matter is dislodged from the system. This should be effected in general by inducing a copious perspiration; to produce which, a preternatural degree of heat or inflammation must be excited by internal remedies. Fever is nothing more nor less than a wholesome and salutary effort of nature to throw off some morbid matter, and therefore every means to lessen this indication proves injurious. Bleeding, in consequence of the debility it produces, prevents such indication from being fulfilled.

I have now a London periodical publication before me, in which the editor laments, that we have no better means to subdue inflammation than by bleeding. He remarks,

“Our most valued remedies against inflammation are but ill adapted for curing that state of disease. They do not act directly on the diseased part; the action is only indirect; therefore it is imperfect.

Bleeding, the best of them, is in this predicament. The direct action of bleeding is only to lessen the quantity of blood. Now, suppose, as often happens, that a person is apparently well to day, and he is taken ill with an inflammation of the lungs to-morrow; in such a case, it will perhaps be necessary to take away several pounds of blood from the patient, and yet, the quantity of blood in his body must have been much the same just before the attack when the person was in good health, as it was afterward when the disease had commenced. The bleeding therefore cannot be employed to lessen the quantity of blood. Some other reason must exist.

The truth is, that lessening the quantity of blood is the best mode we know of, to control that ebullition of the circulation which forms the important feature of the inflammatory state. But, it is evident that this action of bleeding on the disease is only an indirect action; and it is moreover true, that it is positively injurious to the constitution to take away so large a quantity of the vital fluid as the blood is very properly called.”

I was called a few days ago, to see a lady who had been bled within a few months seventeen times, for some inconsiderable complaint.—The last blood drawn was as transparent and limpid as water. She was so far exhausted as to be unable to walk; she was reduced to a state of misery. Her pulse languid; her countenance ghastly; her extremities

swollen; and evident symptoms of approaching dissolution. I might cite scores of cases, in which people have either lost their health or lives in the same manner. In pneumonia, or inflammation of the lungs, blood-letting is practised without reason or mercy. *Again and again* the patient is bled, till his strength is completely exhausted, when a free perspiration and other means would afford immediate relief without destroying the constitutional stamina.

Dr. Sandwich, an English surgeon, has written a treatise recommending in the highest terms, the most copious depletions. He informs us, that in every species of inflammation it is necessary "to bleed in quick succession;" and that unless we speedily repeat our bleedings, we often actually increase the violence of the disease, and convert what was mere congestion into positive inflammation. He indeed, lays down the following position, as a practical maxim; "whenever an inflammation is not cured by the first bleeding, the operation should be repeated every two, four, or six hours, until it is."

Dr. S. presents a case in point, viz. of pneumonia, in which thirty ounces of blood were first taken. This was at twelve o'clock on the 28th of March. At eight o'clock thirty leeches were applied to the affected side. At six the next day, twenty ounces more of blood were taken; in the evening, sixty small leeches were applied to the side. On the third day, at six, the pulse being 110, twenty ounces of blood were taken, and a physician was sent for. "The relief obtained by the bleeding was not at this time decisive. *The blood still showed no size; nevertheless I was certain,*" says Dr. S. "the disease was pneumonia," and anxiously pressed another bleeding, which was overruled. Another physician was accordingly sent for; but, in consequence of a difference of opinion between the two, the patient was not again bled till the afternoon of the 2d of April, "when twenty-two ounces of blood were abstracted, with decided relief and syncope." After this there was a suspension of active measures, until the 6th, when inflammation, evidently to Dr. S. and one of the attending physicians, still existing in the pericardium, the patient was again "bled, *usque ad deliquium*, (fifty ounces,) and was in a state verging on syncope for several hours." Early in the morning on the 7th, twelve ounces more were abstracted; and during the three following days the system was in a state of torpor. On the 11th, in the evening there was a relapse. In the morning (4 o'clock, A. M.) twelve leeches were applied, and sixteen ounces of blood taken from the arm. Our author's next date is 20th; but he speaks of this as of a day immediately succeeding the 11th; for he says, "a comfortable night was the result of these measures, (the measures of the 11th,) but the next morning we found it necessary to abstract sixteen ounces more blood." On the 22d, thirty ounces more were taken. On the 25th, twenty-four good leeches were applied to the side. At eight o'clock on this day "the patient was almost exanimate, the face corpse-like, and the pulse vermicular and past numeration." The debility the whole of the next day was extreme. On the following morning the memory was gone, and the mind imbecile.*

* Was ever a bullock more completely bled to death!

Dr. Reid, in the Medical and Physical Journal, reports as follows:—The reporter of Finsbury Dispensary has, this last month, been impressed more deeply than ever with the fatal folly of bleeding. A person who, at a very advanced period of life, was sinking under the combined operation of age and intemperance was advised, on account of a difficulty of breathing, arising from general debility and a mutilation of the pulmonary organs, to experience frequent and extravagant evacuations from the arm; which of course, in a very short time, put a period to his terrestrial existence.

If the employment of the lancet was abolished altogether, it would perhaps, save annually a greater number of lives, than in one year, the sword has ever destroyed. Medical men are sometimes apt to consider themselves, and are generally regarded by others, as insignificant and inefficient unless they are doing something; that is, either performing some painful operation, or administering some powerful remedy. Whereas the fact is, that in no inconsiderable proportion of cases the best thing that can be done is to let the patient alone.

An inflammatory fever, or a habit indicating excess of general excitement, in this enervated age very rarely occurs; and local inflammation, such as acute rheumatism, gout, or quinzy, will seldom, with impunity, admit the opening of a vein. In the last disease, the writer has had more especial reason to entertain this opinion, in which he is confirmed by the authority of a man, celebrated as a philosopher, although not a member of the medical profession. “Ah, these accursed physicians! they will certainly kill her with their blood-lettings. I have been myself extremely subject to the quinzy, and have invariably found that bleeding increased its violence; when, on the other hand, I contented myself with using a gargle, and putting my feet in warm water, generally found myself well the following day.”

How absurd, to take away any part of that fluid which conduces most essentially and immediately to the vigour and support of the constitution.

Dr. Whyth relates a case which proved fatal in consequence of bleeding. A delicate or nervous girl, having chilled herself at the return of a critical period, was next morning at four o'clock, seized with stupor, and difficulty of speaking or moving. She was soon after bled and blistered. At eight o'clock she could neither speak nor swallow, had a hiccough, and was pale and cold, though her pulse and breathing were natural. Besides taking medicines, she was now bled again, and a third time in the afternoon, and died at ten o'clock; eighteen hours after her seizure. No one can doubt for a moment but that this lady was killed by her physician.

The reporter was called up last evening suddenly, to a patient labouring under inflammation of the stomach. An evacuation of blood, which exaggerates that complaint by inducing debility, was abandoned. I administered a purgative, in the form of an emana, which afforded relief not long after it was given. Two persons were this day slain in this neighbourhood by the lancet, and it was expected that another would soon share the same fate. Well, indeed, might this philosopher exclaim. “Ah, these accursed physicians!”

If one single man can do so much mischief with this instrument, the lancet, what mischief is done throughout the world by thousands of others!

Dr. James Mann, who was Hospital Surgeon to the army of the United States, in the years 1812, 1813, and 1814, relates the following case:—He says “a man at Rochester was bled eight ounces, and within twenty-four hours took *one hundred grains of mercury, one hundred grains of jalap, two ounces of castor-oil, and four ounces of salts.*” He adds, “this man died suffocated while walking his room.”

SECTION IV.

REMARKS ON BLEEDING, BY DR. ROSS.

Rush says, in his Account of the Yellow-Fever of 1793, page 275, “As a proof that *I did not draw one ounce of blood too much*, it will only be necessary to add, that hæmorrhages *frequently* occurred after a third, a fourth, and, in one instance, *after* a sixth bleeding had been used.” To this statement a Scotch physician, who was travelling through the United States, and who happened to be then at Philadelphia, made the following reply, by which the reader will be fully convinced, that the spontaneous hæmorrhage, in place of being prevented, is produced, by copious bleeding, and that Rush’s proof of the efficacy of his remedy, is, on the contrary, a proof of its mortal effects.

In the list of misfortunes brought upon the city of Philadelphia by the prevailing epidemic, must be included the degradation of its medical character. Previous to the appearance of this formidable disease, the physicians of Philadelphia were esteemed the most eminent on the continent of America; they have since sunk from that state of exaltation to a condition bordering on contempt, in consequence of the rash practice and absurd publications of some of their body, and the injudicious silence of others. I do not mean to say, that every silly paper should have received a regular answer: arguments evidently contemptible refute themselves. But it sometimes happens, that arguments sufficiently specious to impose upon readers of sound understanding, who are unacquainted with the nature of the animal economy, are brought forward for the purpose of supporting a very dangerous practice. In such a case, it is the duty of professional men, who are better informed, to expose the fallacy of such reasoning, that the dangerous tendency of the doctrines attempted to be established by it may be distinctly perceived.

Those observations are meant to apply particularly to an argument which has been triumphantly employed by the phlebotomists, both in writing and conversation, and very ostentatiously displayed by Dr. Caldwell, in his treatise, dated the 10th of October.

It is confidently asserted, that the spontaneous hæmorrhages, which frequently occur in malignant fevers, are solely occasioned by the omission of copious blood-letting; and as these excessive hæmorrhages ap-

pear in many cases to be the immediate cause of the death of the patient, we are told this fatal termination would have been prevented, if blood had been freely drawn at any preceding period of the disease.

This reasoning is so specious, that, in the minds of all those readers who are unacquainted with the anatomy and pathology of the human body, it must be decisive.

To detect the fallacy of this reasoning, it will be necessary to examine critically the facts upon which it is founded, and then to make a few observations upon the conclusions that have been drawn by the phlebotomist, from those facts, in support of a practice replete with danger.

If those who employ this reasoning, mean that, provided the vessels be completely drained of their blood, there will be no risk of spontaneous hæmorrhage, we admit the truth of the observation. For conjurors tell us, where nothing is, nothing can come out; and it hardly requires a man to be a conjurer to give us that information. But, if they mean to say, such a quantity of blood as may be drawn without producing a dangerous degree of debility in the patient, being taken away in the early part of the disease, or at any time preceding the spontaneous hæmorrhage, will prevent that hæmorrhage from taking place, it follows, that it is caused by the vascular system being overloaded, insomuch that the increased action of the vessels bursts a passage for the superabundant blood, and nature does too late, what ought to have been earlier performed by the doctor. Hence it follows, that spontaneous hæmorrhages, in malignant diseases, must be most likely to occur when the vessels are fullest, and the vascular action most violent.

But is this really the case? Does spontaneous hæmorrhage most frequently occur at the commencement of malignant diseases, when the vessels are fullest, and the action most violent; or at their close, when the vessels are comparatively empty, and the vigor of the system exhausted?

Let us inquire what happens in a very formidable disease, the *causus of Hippocrates*, better known at Philadelphia by a much-dreaded name, the yellow fever of the West Indies. This complaint commences with a febrile state of excessive ardour and violence, which continues generally from sixty to eighty hours, when the symptoms of violent action rather suddenly ceases, and extreme debility marks the remainder of the disease.

I will ask Dr. Caldwell, and those who think as he does, whether, agreeably to their system, spontaneous hæmorrhages ought not more frequently to occur at the commencement, during the ardent state of this disease, when the vessels are fullest, than during the quiescent state, when the vigour of the system is exhausted, and the mere abstraction of food, and waste by natural evacuations (supposing artificial ones to have been refrained from) must have reduced the vessels to a state of comparative emptiness? As men of candour, they must answer in the affirmative.

I will then ask whether spontaneous hæmorrhage really happens oftener in the commencement than the close of the yellow-fever? As men of veracity, they must answer in the negative; nay, as men solicitous for the detection of error and the establishment of truth, they

will go farther in their answer than is required by my question. They will admit, that, in every case of yellow-fever, they have seen, heard, or read of, in which this symptom has occurred, it has never appeared but in the last stage, or quiescent state. We must, therefore, cease to look for its explanation in the superabundance of blood, and fix our attention upon what appears to be its proximate cause, the extreme debility prevails at the time of its occurrence.

That excessive weakness alone is sufficient to account for spontaneous hæmorrhage,* will be completely proved by observing the frequency of its occurrence in a disease of pure debility, where there is no febrile action, and where, from the situation of those subject to the disorder, at and preceding the commencement of it, there can be no reason to suspect fulness of the vascular system.—I allude to the sea scurvy. This complaint afflicts not only seamen in long voyages, who are obliged to subsist on aliment, the nutritive quality of which has been diminished by time and the mode of preservation, but it also aggravates the miseries of winter to the poorer inhabitants of northern climates.

Among the symptoms of this shocking disease, none are so formidable as spontaneous hæmorrhages: they are apt to occur upon the slightest motion; sometimes the bleeding is external, sometimes internal, and frequently fatal. So slowly does death advance, from any other cause, in this disease, that should the wretched patient be so fortunate to escape hæmorrhage, he may linger out a miserable existence, till the conclusion of his voyage, or the approach of summer enables him to procure sustenance more nutritious; and the danger of spontaneous hæmorrhage is removed by his returning strength, though accompanied by increased fulness of the blood vessels.

The blood does not escape, in these diseases, in consequence of violent action in the moving powers, or from any distention of the vascular system by the quantity contained, but from inability in the extreme vessels to resist the slightest impulse.

As I have shown the cause of the symptom, on which the strong argument of the phlebotomists is founded, to have been misunderstood, it can hardly be necessary to say the conclusion they have drawn must be erroneous. Dr. Caldwell says, “in the occurrence of this spontaneous hæmorrhage, nature undoubtedly gives an obvious hint which all physicians should have discernment and sagacity sufficient to improve. She would seem to tell them in the language of facts, that, if they either through ignorance or inattention, neglect the evacuation of blood-letting entirely, or use the lancet in a manner not sufficiently bold, she must and will, by means of this discharge, make a final effort for the safety of the patient herself; it is, however, to be greatly lamented that she makes this effort in vain.” Adopting the idea of Dr. Caldwell, that nature is the physician’s kind directress, her hint may be explained more consistently with facts, by saying she intends, by her conduct,

* What folly, then to induce a greater degree of debility in this, and other disorders, by bleeding.

to caution the physician against bleeding in this disease, particularly at a late period, by showing that it is always prejudicial, often fatal.

SECTION V.

ON THE MORBID EFFECTS OF THE LOSS OF BLOOD.

DR. MARSHALL HALL, an English physician, has written a treatise on the "morbid and curative effects of loss of blood," in which he demonstrates the pernicious effects of blood-letting in a variety of diseases. He states in his introductory remarks, that the subject has been by no means understood until very recently. He has given many facts "to afford, he states, not only an additional, but an unbiassed testimony to the truth of the general principles laid down." In further discussing this subject, I shall refer to this work, and make such extracts from it, as are calculated to corroborate my views.

"The question of the morbid effects of loss of blood appears to me," says the author, "not to have sufficiently engaged the attention either of the physiologist or of the practical physician; yet to both they offer objects of inquiry of great interest and importance.

To the physiologist the phenomena of syncope, of reaction, and of sinking, present innumerable objects for his consideration, of the very deepest interest. The influence of syncope on the functions of the brain, of the heart, of the capillary vessels, of the lungs, of the stomach, &c.; the phenomena of reaction, excessive or defective; but especially the phenomena and influence of the sinking state, or state of failure and decline of the vital powers, in their relation both to the nervous, the circulating, and the organic systems, severally present objects for our investigation, in a physiological point of view, at once of much novelty and of the highest utility.

To the physician the symptoms of reaction, so similar to those of some inflammatory affections of the head and of the heart, and the phenomena of the sinking state, so similar to those of some other affections of the head, and to those of some morbid affections within the chest and abdomen, present subjects for his observation of the utmost moment in actual practice. The diagnosis of these cases is most important; the prognosis and the treatment alike depend upon it.

The morbid effects of loss of blood may be divided into the immediate and into the more remote. Besides syncope, from its slightest to its fatal form, the former include delirium, convulsions, and coma. The latter comprise the states of excessive reaction, of defective reaction, of the gradual failure of the vital powers, and of more rapid or sudden sinking or dissolution. The former, the different forms of syncope at least, are comparatively well known. The latter appear to me not to have received the degree of attention due to them. No author has described with accuracy the secondary or more remote effects of loss of blood, under the various circumstances of repetition, or continued flow, in which it may occur. And yet when we reflect how constantly blood-

letting is employed as a remedy, and how frequently hæmorrhage occurs as a disease, it must evidently be of great moment to trace the symptoms and effects of a diminished quantity of blood upon the different functions of the human body.

This inquiry possesses a still higher interest in a practical point of view; for, as I shall immediately explain, some of the more obvious and striking effects of loss of blood, or those of reaction, are such as to suggest the idea of increased power and energy of the system, and of increased action in some of its organs, and to lead to an erroneous and dangerous employment or repetition of the lancet, when a directly opposite mode of treatment is required; while the state of actual but protracted sinking frequently resembles a state of oppression of the brain, or of congestion of the lungs, so accurately, as to prompt the unwary practitioner to a still more suddenly fatal use of the lancet.

There is another point of view in which the effects of loss of blood become interesting in the practice of physic. I have already stated that the symptoms of reaction from loss of blood, accurately resemble those of power in the system, and of morbidly increased action of the encephalon, and that from these causes the case is very apt to be mistaken, and mistreated by the further abstraction of blood. The result of this treatment is in itself again apt further to mislead us; for all the previous symptoms are promptly and completely relieved; and this relief, in its turn, again suggests the renewed use of the lancet. In this manner the last blood-letting may prove suddenly and unexpectedly fatal.

The next point for our consideration is the influence of the age, the strength, and the varied constitution of the patient, in modifying the effects of loss of blood. On these greatly depends the tendency to defective or to excessive reaction, and to the state of sinking. So that the effects do not correspond with the measure, or even a comparative measure, of loss of blood, in different subjects. Sometimes there is no reaction. At other times the reaction is excessive and even violent. In a third instance we may be surprised by the sudden accession of a sinking state, or even of the symptoms of immediate dissolution. I think the whole of these varied and even opposite phenomena admits of a ready explanation. In general it may be said that reaction is principally observed in connection with strength of system; in infancy and in old age reaction is slight; exhaustion from loss of blood is then most apt to shew itself in the form of failure or sinking of the vital powers.

But a question still more interesting even than this, is that of the influence of different diseases in inducing in the system, resistance or susceptibility in regard to the effects of loss of blood.

The next point for our consideration in the inquiry into the morbid effects of loss of blood, is that of the organic changes induced during the state of sinking. These are chiefly observed in the brain, in the cavities of the serous membranes, in the bronchia, in the lungs, and in the track of the alimentary canal, under the forms of effusion, dropsy, &c.

We must consider, in the last place, the proper mode of treating the effects of loss of blood, both constitutional and local.

The effects of loss of blood then require to be traced successively in their relation both to the central and to the ultimate parts both of the

nervous and vascular systems. They involve questions of the deepest interest in regard to the physiology, pathology, and treatment."

SECTION VI.

ON THE IMMEDIATE EFFECTS OF LOSS OF BLOOD.

1. *Syncope or Fainting.*

The most common effects of the loss of blood, is syncope or fainting, which appears to arise from the usual stimulus of blood of the brain being withdrawn, or a deficiency of nervous fluid or excitement. This very fact is sufficient to show that abstracting any portion of the vital fluid from the system, instead of acting as a remedial agent, does violence to nature, by deranging the animal economy. Every physician who might be called to a person suffering under the ordinary effects of the loss of blood, would prescribe the same remedies as if it proceeded from disease. A small quantity of blood abstracted, sometimes produces the most alarming and dangerous consequences; but fainting is the most usual effect that follows the use of the lancet. In ordinary syncope from bleeding, the patient first experiences dizziness; then a loss of sensation; respiration is affected, being suspended until the painful sensation produced rouses the patient to draw deep and repeated sighs; the heart and pulse beats slow and weak; the face and general surface become pale, cool, and bedewed with perspiration; nausea or sickness at the stomach, &c. On recovery, there is sometimes momentary delirium.

In great hæmorrhage, or excessive discharges of blood, these symptoms assume a more frightful aspect; the countenance becomes more and more pale and sunk. Every symptom shows or denotes an impaired state of the energies of the brain. The breathing becomes stentorious, and at length affected by terrible gasping; pulse feeble, or imperceptible; heat of the body departs; the extremities become colder and colder, notwithstanding the application of external warmth; at length the strength fails, and the patient sinks, gasps, and expires.

2. *Convulsions.*

The next most common effect of bleeding after fainting, is convulsion. It occurs particularly in children, and in cases of the slow and excessive loss of blood. In this case, also, the brain seems to be the primary seat of the injury, arising from exhaustion of its customary stimulus, the blood. It is a matter of surprise that physiologists have never noticed the connection or correspondent relation between the nervous and the vascular system. Health cannot be preserved unless a regular and uniform balance is maintained. It is in consequence of this balance being lost, that the abstraction of blood is attended with such pernicious effects. Dr. Hall relates the two following cases of convulsions:

1. "A physician, aged thirty-four, became affected with inflammation of the larynx. He was bled freely on two successive mornings at his

own instance. In the afternoon of the second day, the disease being unsubdued, he was bled a third time, placed in a rather inclined position upon a sofa. The blood was allowed to flow until thirty-four ounces were taken. He then suddenly fell upon the floor violently convulsed; and he remained for some time afterwards in such a state of syncope as to render his recovery very doubtful; being carried to bed, however, and cordials being administered, he slowly recovered.

2. A similar case is given by Mr. Travers. This gentleman observes, 'Some patients cannot bear the loss of blood: it gives rise to prostration, attended with convulsions, in which the circulation fails so alarmingly as to require watching for several hours and the repeated administration of stimulants to restore it. A very intelligent surgeon in the neighbourhood of London, in bleeding a clergyman to the extent of twenty ounces, was compelled to remain with him during the whole of that day; and notwithstanding frequent recourse to brandy, continued long apprehensive for the patient's life. He represented the convulsions, which returned in paroxysms, as resembling the puerperal in their severest form.' "

A writer states, "that the loss of blood in operations, though insufficient to create alarm for the patient's safety on that score, obviously predisposes to the convulsions which sometimes prove fatal, especially to children. I have known an infant die of convulsions on the day after the removal of a small mark upon the head."

Puerperal convulsions often arise from loss of blood. One of the common causes of fits in children also arises in consequence of the loss of blood. By the experiments of Dr. Kelly upon dogs and sheep, fits or convulsions were found to be a frequent consequence of exhaustion arising from the loss of blood.

3. *Delirium.*

Delirium occurs as an immediate, and mania as a remote effect of the loss of blood.

The following case illustrates this fact. A young man, aged thirty, had lost much blood from the arm and by leeches; and under the operation of an active purgative, fell into complete syncope or fainting. He was found perfectly colourless and senseless, and affected with rattling in breathing. He made a convulsive effort to expectorate, and the blood rushed into his cheeks. He then began to recover, opened his eyes, and complained of deafness; chills followed; fever; constant delirium; numbness of the feet and legs, &c. He finally, however, recovered.

A person fell and hurt his back. For four days in succession he was bled, followed by faintness, sickness and retching, with much affection of the head; paleness; sighing; hurrying alarm of mind; extraordinary noise and visions, with delirium, which finally destroyed the patient.

Convulsion and delirium combined. Mrs. — miscarried on the third month of pregnancy. There was much hemorrhage; she turned pale, and nearly fainted; became affected with convulsion and delirium.

Delirium sometimes occurs in certain habits from the loss of even a small quantity of blood.

4. *Coma or Lethargy.*

A comatose state is often followed by blood-letting, which is so nearly allied to apoplexy, that it is difficult to discriminate between the two diseases. It appears very often in infants and children.

Mr. C. Bell observes, "when a man who has cut his throat is brought into the hospital, he is in a state very much resembling that which some authors have described as accompanying severe wounds. Though sensible, he is cold, pale, taciturn, and very often, although such men are desirous of living, they sink within twenty-four hours. This appears at first to proceed from a strong impression on the mind; that is, I believe, the consequence of loss of blood, and the shock thus given to their powers of life."

5. *Of Sudden Death from the loss of Blood.*

Sometimes the loss of blood suddenly proves fatal. One of our most distinguished citizens, it is stated, lost his life the other day, by a single bleeding.

A case of this kind is mentioned in the lancet. A person received a slight injury, for which he was first bled eighteen ounces, and at noon twenty ounces more were taken. Next day the pulse was ninety, full, and rather jerking. Eighteen ounces more were taken, and at night the same quantity. Next day he was ordered to be bled eighteen ounces more. In two hours afterwards, another physician was called in consultation; when twenty ounces of blood more were drawn, making in all one hundred and twelve ounces, in this short space of time. After the last bleeding, the pulse became a mere flutter, and the man only survived a few hours. On a post mortem examination, the vessels about the heart were quite empty; the brain very pale; almost colourless; the liver was also of a very light colour.

I shall here give in illustration, the observations on the medical treatment of general Washington's last illness, by John Reid, M. D., physician to the Finsbury English Dispensary, and professor of the theory and practice of physic.

In reading the official report of the death of general Washington, as stated in the newspapers, &c. I should imagine there were few medical persons who did not feel astonishment at the extraordinary manner in which that great man was treated by his physicians, during his last and fatal indisposition.

Some time in the night of the 13th of December, it is said, the general was seized by a disease called the cynanche trachealis, (croup).

During the same night he sent for a bleeder, who took from him twelve or fourteen ounces of blood.

Next morning a physician was sent for, who arrived at Mount Vernon, at eleven o'clock; when, imagining danger in the case, he advised the calling of two consulting physicians.

In the interval, however, he thought proper to employ, in spite of the twelve ounces that had already been expended, two copious bleedings. Now when we consider that these are called *copious*, and the other is not noticed as such, and all indifference with which a future,

most copious bleeding is afterward mentioned, we may presume that each of these was twenty-five or twenty ounces at least.

After this, "two moderate doses of calomel were administered." I know not exactly, what an American moderate dose of calomel may be, but if it is as fair to presume, it be in proportion to the bleedings, we may conclude that it was at least very considerable.

Upon the arrival of the first consulting physician, it was agreed that as there were no signs of accumulation in the bronchial vessels of the lungs they should try another bleeding.

Now, this appears to be perfectly inexplicable. As there were, at present, no signs of accumulation in the bronchial vessels of the lungs, they were driven to another bleeding. Hence it will be seen, that this last bleeding was to produce an accumulation in the bronchial vessels of the lungs. There was great difficulty of breathing, great inflammation; but as there was as yet no accumulation in the lungs, they were determined to induce that also, and as a likely means of inducing it, had recourse to the most extravagant effusion of blood. This is not an unfair interpretation of their words; but it could not have been their real meaning: their real meaning, it is impossible to discover. In addition to all their previous venesections, thirty-two ounces are now drawn! The medical reader will not be surprised to find that this was unattended by any apparent alleviation of the disease.

In the next place, vapours of vinegar and water are frequently inhaled. Two doses of calomel were already given, but this is not deemed sufficient, ten grains of calomel are added; nor is even this sufficient. Repeated doses of emetic tartar, amounting in all to five or six grains are now administered. It is said, the powers of life now seemed to yield, to the force of the disorder. To many, it may appear that the yielding of the vital principle, in these circumstances, was not altogether owing to the force of the disorder.

The patient, lying in this feeble and nearly exhausted state, is to be still farther tormented. Blisters were next applied to his extremities, together with a cataplasm of bran and vinegar to his throat.

It is observed that speaking, which was painful from the beginning, now became scarcely practicable. When we reflect upon the extreme weakness, to which the patient must, by this time, have been reduced, and that he had both a blister and cataplasm of bran and vinegar to his throat, can we wonder that speaking would be scarcely practicable! respiration grew more and more contracted and imperfect, until after eleven o'clock on Saturday night, when he expired without a struggle.

Think of a man being, within the brief space of little more than twelve hours, deprived of eighty or ninety ounces of blood; afterward swallowing two *moderate* American doses of calomel, which were accompanied by an injection; then five grains of calomel and five or six grains of emetic tartar; vapours of vinegar and water frequently inhaled; blisters applied to his extremities; a cataplasm of bran and vinegar applied to his throat, upon which a blister had already been fixed; is it surprising that when thus treated, the afflicted general, after various ineffectual struggles for utterance, at length articulated a desire that he might be allowed to die without interruption!

To have resisted the fatal operation of such herculean remedies, one would imagine, that this venerable old man ought, at least to have retained the vigour of his earliest youth.

6. *Of Exhaustion with Excessive Reaction.*

Exhaustion from blood-letting may assume several different characters. It may be attended with excessive or defective reaction, or with actual sinking of the vital powers, causing delirium or lethargy. When there has been great loss of blood, or repeated blood-lettings, the pulse, instead of being slow and feeble, acquires a morbid frequency; a throbbing beat, and in some cases, there is excessive reaction.

It is from this kind of pulse, that physicians are so frequently deceived. They bleed and bleed because the pulse is tense and full, when in reality this very fulness is occasioned by the bleeding; thousands are bled to death in consequence of these erroneous views.

The reaction that follows bleeding, is sometimes followed by symptoms still more severe. The brain becomes very much affected; great intolerance of light and sound; pain in the head and delirium; the action of the heart and arteries are morbidly increased; great palpitation; throbbings of the carotid arteries; the patient is greatly alarmed, and impressed with the feeling of approaching dissolution; fainting; the pulse will sometimes rise from 100 to 130, with a bounding of the artery; respiration is frequent and hurried, attended with panting and sighing; restlessness; heat of the skin; sudden dissolution has sometimes occurred upon the slightest exertion.

"I was about," says a physician, "to bleed in such a case, but fortunately" observes he, "for my patient and for myself, the repugnance of the patient to general bleeding, prevented me from using the lancet, and so saved her life."

Dr. Cooke relates a case which corroborates the doctrine here maintained. He says, "After uterine hæmorrhage, and also after copious depletion on account of pulmonary and other inflammations, I have frequently observed the symptoms of cerebral congestion: and which has generally appeared to arise from the excitement occasioned by some mental effort, though occasionally it has arisen without an evident cause. Whilst the other parts of the body appear comparatively bloodless, the vessels of the head throb violently; there is severe pain; confusion of intellect, sometimes to such a degree as to threaten delirium; the pulse at the wrist is usually small and vibrating, and the countenance distressed. When I first observed these symptoms I was led to abstract blood, from an apprehension of phrenitis: but I did harm; for if the urgency of symptoms was diminished, the susceptibility to a recurrence was increased, and restoration to health was protracted. The liability to this form of cerebral plethora has appeared to me to be proportionate to the preceding hæmorrhage, and the consequent debility. If in this condition an intrusive visitor be admitted to converse, though but for a short time, with the patient—or if the patient attempt to read, or in any other way to employ the mental faculties beyond what is perfectly easy—or if the mind be agitated, this state of the head will almost inevitably be induced. It may, however, be brought on by all those causes which

tend to destroy the equilibrium of circulation; and none are more likely in this condition of the patient, than noise in the room, deficiency of sleep, improper food, a constipated state of the bowels, or a morbid state of the secretions into them. This susceptibility to local congestion after excessive loss of blood, depends upon the want of that due balance which, in a state of health, subsists between the nervous and vascular systems.

A lady aged twenty-five had been frequently bled, on account of symptoms in the head, which had followed an injury. Considerable relief had followed each bleeding, but the symptoms had soon returned so as to lead to a repetition of the bleeding at short intervals, and this had been going on for several months. When I saw her she was stretched upon a couch, her face of the most death-like paleness, or rather of the paleness of a stucco figure, her pulse very rapid and as small as a thread, her general weakness extreme. The mass of blood appeared to be reduced to the lowest point that was compatible with life, but she still complained of frequent head-ache, violent throbbing in the head, confusion and giddiness. It was evident that evacuation could be carried no farther, and in consultation with a very intelligent medical man who had the charge of her, it was agreed as a last experiment, to make a trial of the opposite system, nourishing diet and tonics. In a fortnight she was restored to very tolerable health.

It would, perhaps, be difficult to offer any observations on the nature and cause of excessive reaction: but it is plain that the state of sinking involves a greatly impaired state of the functions of all the vital organs, and especially of the brain, from defective stimulus. The tendency to dozing, the snoring and stertor, the imperfect respiration, the impaired action of the sphincters, the defective action of the lungs, and the accumulating of the secretions of the bronchia, the feeble and hurried heat of the heart and pulse, the disordered state of the secretions of the stomach and bowels, and flatulence, all denote an impaired condition of the nervous energy. The state of sinking may, indeed, in certain points of view, be compared with the state of the functions in apoplexy: and to the effects observed on abstracting the influence of the brain and spinal cord, or by dividing the eighth pair of nerves, or by destroying the lower portion of the cord.

“Where bleeding has been carried to a great extent, symptoms frequently occur which in reality arise from the loss of blood, but which a superficial observer will be led to attribute to the injury itself, and concerning which indeed it is sometimes difficult, even for the most experienced surgeon, to pronounce in the first instance to which of these two causes they are to be referred. *Repeated copious blood-letting is of itself adequate to produce a hardness of the pulse, which we shall in vain endeavour to subdue, by persevering in the same system of treatment.* In many individuals it will produce head-ache and confusion of mind, not very different from what the injury itself had previously occasioned. These things may be observed especially in young females who are disposed to hysteria, and whom I have often known to suffer from a continued aggravation of such symptoms as I have described, while the system of depletion has been continued, recovering immediately on the use of the lancet being laid aside, and on

their being allowed to take solid nourishment, with occasional doses of carbonate of ammonia. Dr. Marshall Hall has published in the thirteenth volume of the *Medico-Chirurgical Transactions*, some excellent practical observations on the effects of copious blood-letting, many of which are applicable to the cases mentioned above.”*

7. *Of Sinking, or more Sudden Dissolution.*

If the loss of blood be repeated still further, not only syncope, but a state of sinking is induced; the effects of reaction are of course in this case, permanently relieved, whilst a different series of phenomena, already fully described, is established. This transition of reaction into sinking may either be spontaneous, or it may be the effect of a last blood-letting, the state of syncope scarcely ceasing, no reaction following, but the total though gradual failure of the vital powers.

When the last bleeding has been considerable, it has, in some cases, been followed by the most dreadful gaspings and other convulsive motions, and death. It should be observed that between the most gradual sinking and the most sudden dissolution, as the effects of blood-letting, there is every intermediate shade, with the phenomena of which it is of the utmost importance to be acquainted. These varied phenomena may, I think, be collected from the observations which have been made in this and the preceding sections. They are further illustrated by the following cases which exemplify the fatal effects of loss of blood, as supervening more and less gradually upon the use of the lancet.

Mrs. —, aged thirty, had been effected with what appeared to be a slight attack of influenza; she was seized with chills, and soon afterwards the pains of labour came on and issued in delivery in about fifteen hours, at 9 o'clock, A. M. this was followed by much fever, the countenance being flushed, the pulse frequent, and the breathing difficult with incessant cough; these symptoms increased towards evening and in the night, and about forty ounces of blood were drawn from the arm at two blood-lettings, and the next morning twelve leeches were applied to the chest, with great relief. In the evening a blister was applied.—The night was passed more comfortably; she dosed a little and was cheerful, and continued relieved in the morning. As a preventive against a relapse, however, three teacupsful of blood were taken. The patient became faint during the flow of the blood, sank from that time, and never again rallied; she became extremely feeble, and could scarcely articulate, and from being cheerful the day before, was now impressed with the conviction of approaching dissolution, and expressed herself as unable to recover from the last blood-letting. During this day, Saturday, and during the two succeeding days there was a state of extreme exhaustion,—and still a sense of load at the chest, and pain of the side.

On the succeeding Tuesday the countenance was observed sometimes to flush to a deep scarlet, and then to become quite pallid, and a profuse perspiration frequently ran down the face; the pulse was ex-

* *Medico-Chirurgical Transactions*, Vol. xiv. pp. 381, 382.

tremely frequent, and the pain severe on coughing; there was no delirium though she awoke hurried from sleeps which she described as 'just like death.' During the four following days there was little obvious change; distressing faintings usually came on about two or three o'clock, P. M. On the Sunday, she became drowsy, and evidently more sinking; this state continued to increase, and she died in the evening of the following day.

The last blood-letting, in the case just given, was obviously though rather gradually fatal. In the present case, the fatal event supervened immediately on the use of the lancet. Mrs. — was of pale and sallow complexion and weakly constitution. Six days before her confinement of her first child, she was awoke in the night by severe pain of the head confined to one spot. This pain continued several hours, when Mrs. — applied to her medical man: she was completely relieved by losing sixteen ounces of blood, followed by purgative medicine, and she continued well. Mrs. —'s labour occurred on the 1st of September, 1817, and was rather tedious, but natural, and she had no complaint until the second day, when she experienced a second attack of pain in the head, but less violent than the previous one. She was seen six hours after this attack; she then complained of pain and beating of the head, about the anterior part of the right parietal bone; the skin was hot, and the pulse frequent and strong. Sixteen ounces of blood were taken from the arm, leeches were ordered to be applied to the temples, and an enema and purgative medicine were prescribed. In three hours' time Mrs. — was again visited, and it was deemed necessary to abstract more blood:—six or eight ounces were therefore taken; faintishness was induced, and the symptoms were abated.

On the succeeding morning, September 4th, the symptoms still remained the same; the surface was hot; the bowels had been purged and the evacuations were natural. The saline mixture was ordered. At noon the symptoms remaining as before the purgative medicine was repeated and a blister was applied. In the evening, the evacuation of the bowels was satisfactory, and the pain of the head was not severe, but there was much beating and a rushing noise; and there was restlessness, and a teasing, irritative cough. A draught with thirty drops of the tinctura opii was administered.

On the morning of September 5th, Mrs. — expressed herself as being much better from having enjoyed comfortable sleep. The surface was still hot, and the head still affected as before. In the evening, there was a degree of tenderness in the region of the uterus. She dreaded the idea of being bled, from the faintishness she had before experienced from it, and said it would certainly kill her. On the morning of the 6th, the pain in the region of the uterus was relieved, the head was affected as before, the window was kept open for want of air. In the evening Mrs. — complained of being faint and low. A mixture with camphor and sulphuric æther was prescribed.

On the 7th, the irritative cough again occurred; the pulse was frequent, from one hundred and twenty to one hundred and thirty; and the other symptoms remained unabated. A physician was consulted. Sixteen ounces of blood were directed to be taken from the arm; a

grain of calomel was given every three hours, and the effervescing medicine was ordered.

On the morning of the 8th, Mrs. — appeared to be relieved in every respect; the heat of the surface, and the pain of the head were diminished; the blood presented the buffy coat. It was thought proper, however, to abstract more blood. Four teacups full were taken; the most dreadful fainting followed, with gasping, open mouth, a convulsive action of the diaphragm, and in an hour or two death closed the scene.

The following case forwarded to me by a medical friend is not, I think, unworthy of an insertion.

“A gentleman nearly seventy years of age, the subject of frequent gouty paroxysms, whose constitution was broken down, and who was of a pallid complexion, was suddenly seized with severe pain in the side, hot skin, quick full pulse, and difficulty in breathing. A physician was consulted, who recommended the abstraction of six ounces of blood. The arm was tied up accordingly, the patient being in bed; before two ounces were taken away his pulse sunk, and heavy perspiration came on; with faintness. The patient was placed horizontally in bed, and it was some length of time before his medical attendant deemed it prudent to leave the house.

The blood taken away, manifested the usual character of inflammation, but the pain in the side was not removed. On the following morning he was again visited by his physician, who finding that the pain and other symptoms detailed were not relieved, directed the bleeding to be repeated to six ounces; this was again attempted, but before one ounce escaped, he became so alarmingly faint, that he fell back in the bed, the circulation being suspended for a length of time, and his dissolution expected to take place. Stimuli of every description which could at the moment be brought forward, were resorted to; after a considerable lapse of time, the heart's action was feebly renewed, but its power was never again restored; and the pain in his side was not relieved. From this time he progressively sank, and in a short time expired.”

Dr. Rush, who was such a strenuous advocate for blood-letting, never discovered his error, it appears, until he was afflicted with his last disease. He requested his attending physician to bleed him repeatedly, and when he refused, it is stated that he introduced the lancet into his arm, and extracted so much of the vital fluid, that he sunk under it. It appears now for the first time he saw the delusion in which *he* had been shrouded, all his life time.

Dr. Dewees mentions the case of a person who was so repeatedly bled in a fever, that it induced such a state of debility and sinking, that every stimulant administered availed nothing. He sunk and expired like thousands of others, a victim to the lancet.

A middle aged man, who, for several years, had been an asthmatic, applied to a medical man for advice. Symptoms, hoarseness and difficulty of breathing, with frequent, bounding pulse. The physician prescribed venesection, to which the patient readily consented, and accordingly, about twenty ounces of blood were taken from his arm in a sitting posture, the pulse continuing full and strong, when suddenly, said he, “I feel very faint; do lay me down.” He was now laid upon the

floor in a horizontal position; cold water was sprinkled on his face, and volatiles applied to his nostrils, when reaction took place; but complaining of considerable debility, he was advised to lay an hour or two to recruit; after which, he felt relieved, and walked a short distance to his lodgings, but within ten days he expired.

I once bled a young lady in the arm for a suppression of the menses. I had not taken more than half an ounce of blood, before she fainted, and continued so long in a state of frightful syncope, that I was really apprehensive that reaction never would take place. However, by sprinkling a few drops of cold water on her face, by the application of volatiles to the nostrils, and the administration of hot brandy sling internally, she recovered.

Another young lady in New-Haven, says the author of the above cases, fainted immediately on the introduction of the lancet into her arm.

A lady in this city was bled for a sick, or periodical head-ache. It produced such a sinking and prostration, that it proved fatal in three hours.

Each successive blood-letting, is of course attended with increased risk. There is considerable danger where the reaction is strong; still greater when it is feeble. A large blood-letting in such cases may be followed by sudden death. There is greater danger when fainting has been several times induced, and when there is the least tendency to 'want air.'

SECTION VII.

EFFECTS OF THE LOSS OF BLOOD ON THE INTERNAL ORGANS.

It appears evident that debility arising from loss of blood, may lead to effusion in the ventricles of the brain, and that such a state of exhaustion is no security against an attack of the apoplexy. Dr. Denman relates a case, which shows conclusively that this is the fact. A patient of his had suffered several years by hemorrhage from the uterus. After passing a day without any unusual complaint, she went to bed in good spirits, but was found next morning in a state of insensibility, &c. She remained in this state about twenty-four hours, and died. Leave was also given to inspect the body, which she often expressed a wish might be done. About four ounces of blood were found in the ventricles of the brain, containing serum or water. This extravasation was clearly the immediate cause of her death, little as it might have been expected, on account of the daily profuse discharge to which she had for so many years been subject.

Dr. Hey in treating upon child bed fever, relates a case which shows that a loss of blood causes congestion of the brain. She had been bled several times, which did not reduce the pulse. After a few days she died in a state of great anxiety and restlessness. The seat of the disease, appeared to be in the head, evidently showing that there was congestion and extravasation of the brain.

Dr. Sweedy relates another case which corroborates this fact. A lady had lost much blood during the first months of pregnancy, which caused palsy and delirium.

Dr. Hammond relates a case in point. A lady in confinement lost about three pints of blood which produced faintness, head-ache, &c. She was bled to twenty-four ounces, which also produced syncope, but the head was not relieved. The bleeding was repeated, and carried even to fainting. She lost twenty ounces, which produced convulsions. She was much exhausted, the countenance was blanched to an ivory whiteness. She revived and became more comfortable for a few days. She was then attacked with extreme depression, the right arm and leg paralyzed; speech much altered, and swallowing difficult; countenance deathly, and the pulse feeble and scarcely perceptible; all which shows the injury done to the brain by the loss of its customary stimulus, by which we see that the blood is the *primum mobile* or *main spring*, both to the corporeal and mental organization; or in other words, is the support of body and mind.

Dr. Travers mentions a case of inflammation of the lungs, in which a stroke of palsy which destroyed the patient, took place in the very act of bleeding. Permanent blindness also sometimes immediately occurs from bleeding. Thousands of cases might be mentioned of a similar nature.

The Lungs.

Physicians are not aware of the effect of the loss of blood upon the lungs. It has the effect of subtracting the nervous energy almost the same as if the eighth pair of nerves were divided.

Let a person apply his ear to a patient who has been freely bled for inflammation of the lungs. He will find that their office and powers become so far weakened and diminished, as to labour at every inspiration. A peculiar rattle can be heard with or without the immediate application of the ear.

The bronchial vessels first become clogged or loaded with mucus; the lungs become cedematous, and are no longer capable of decomposing the air, and receiving the oxygen, or vital portion of it, so essential to life. Ever since I commenced my practice, I have witnessed this fact, the knowledge of which, has induced me to withhold the lancet in every case of this kind, no matter how severe the attack, and I know not that I have ever lost a single case in all my practice where I have been called within a reasonable time. Notwithstanding this, some of my opponents have pronounced me presumptuous for not bleeding.

No one, however, can form an idea of the superiority of our practice over that usually pursued by physicians, *unless tested by actual experience*; the patient recovers in half the time, without that constitutional injury which invariably arises from repeated blood-lettings.

It has been found that the lungs of those who have died of hemorrhage have been effected by swelling, effusions of lymph, adhesions, &c.

I have not room to enter fully into the effect of the loss of blood upon different parts of the system. Every one knows the tendency to effusion into the cellular membrane. One half of the cases of dropsy, arises, in my opinion. from the use of the lancet.

Typhus Fever.

A judicious practitioner informs me, that after bleeding, in most diseases for a number of years, he abandoned it altogether, in consequence of the inquiry that resulted from it. It often induced typhoid symptoms.

Contusions, Injuries, &c.

Many surgeons state that, as popular as bleeding is, it destroys the restorative principle, or so far prevents the healing process, that the patient cannot recover. One of the surgeons in the New-York Hospital, now disclaims much against the lancet in injuries.—“Sometimes,” he says, “you cannot obtain a particle of blood after a fall, and it is a fortunate circumstance that you cannot, as life is saved by omitting it.” For hundreds of years it has been fashionably to bleed freely after every accident; but now, a new fashion is in vogue, viz. to wait an hour or two before you bleed, or until reaction takes place. What the next fashion in relation to this practice may be, time alone must decide; but I sincerely hope that my maxim will be adopted, which is, after testing its effects thoroughly upon the human system; *seldom or never bleed*.

I shall only give a few more hints on the effects of the loss of blood. Dr. Hall states that there is a remarkable similarity between the effects of the loss of blood, and the state of bloodlessness in chlorosis or obstruction of the menses. Both have a tendency to induce dropsy, extravasation, and lastly of ending in a state of great prostration, or even of sudden death. From which it is evident that the capillary and the general circulation is similar in both complaints. The blood appears almost entirely to desert the surface, and to terminate in serum or water.

SECTION VIII.

MORBID EFFECTS OF BLEEDING IN INFANCY.

If physicians were aware of the morbid effects of bleeding in infancy, they would have recourse to it less frequently. The bare idea of tying up the arms of infants, and abstracting a portion of the vital fluid, has ever seemed to me not only unnatural but appalling. Besides the immediate injurious effect which arises from loss of blood in infancy, these are the best reasons to believe that very many complaints are occasioned by it.

Dr. Hall, to whom we are indebted for much very interesting information on this subject, states that of the whole number of fatal cases of disease in infancy, a great proportion occur from this inappropriate or undue application of exhausting remedies.

“This observation,” says he, “may have a salutary effect in checking the ardour of many young practitioners, who are apt to think that if they have only bled, and purged, and given calomel enough, they have done their duty; when, in fact, in subduing a former, they have exci-

ted a new disease, which they have not understood, and which has led to the fatal result.

This question, and that of the effects of exhaustion in infants and children open a new field for investigation. Almost all our works on infantile diseases are silent on the subject; and yet without an accurate knowledge of it, I regard it as totally impossible that we should be prepared to watch and treat the morbid affections of this young and tender age. The subject must be taken up and investigated anew. All the affections which may arise from exhaustion, must be accurately observed, distinguished from similar affections arising from other causes, and traced back to their origin, and forward in relation to their remedies. In this manner some hydrencephaloid, convulsive, and even croupy affections will be viewed in a new aspect; and we shall be preserved from some painful dilemmas into which we should assuredly fall without this knowledge of the effects of exhaustion."

Bleeding, in dropsy of the head, and other complaints of children, infallibly plunges the little patient into imminent, if not irretrievable danger.

There is a complaint peculiar to infants which very nearly resembles the dropsy of the head, and from which it is customary to bleed; but which, like the latter disease, instead of being benefitted by any kind of depletion, is only aggravated. An opposite course of treatment is required, viz. stimulants.

Dr. Tweedy, Hall, Hemery, Gooch, and Abercrombie, have all hinted at this disease.

The following case is given by Dr. Hall:

I was called a short time ago, to see a little girl, aged two years and three quarters, who had laboured under an attack of influenza. The affection of the chest had been severe and protracted, and sixteen leeches had been applied, besides the administration of other depletory measures, before it had subsided.

The symptoms of the affection of the chest were, however, subdued at last; but the little patient was left extremely exhausted, and in this state a new train of symptoms supervened, not less alarming, and more puzzling, than the first. The child fell into a dozing state, and lay with its eye-lids but half closed; it moaned when any attempt was made to rouse it; the eyes were unfixed on any external object, the pupils were dilated, yet partially contractile on the influx of light; the pulse was 140.

On withdrawing into an adjoining room, the medical gentleman whom I had the pleasure of meeting, observed, "dropsy in the head has now supervened, and we must administer calomel." I replied that I took a different view of the case,—that it resembled hydrencephalus indeed, but arose from exhaustion, and that brandy, not calomel, could alone save the little patient's life. I referred to the history of the case for sufficient sources of exhaustion; and to facts for the actual occurrence of such cases in practice.

We administered brandy, directing thirty drops to be given every two hours, with barley-water in the intervals, and a quarter of a pint of milk twice in the twenty-four hours. The bowels were relieved by magnesia and the warm water injection.

This plan of treatment lowered the number of the pulse, and gradually diminished the severity of the other symptoms, and the patient eventually recovered. Another case is related where a few leeches were applied for inflammation of the head, and which, instead of affording relief, brought on congestion, lethargy, &c. and which proved fatal.

A physician was sent for, to visit a child with croup, who prescribed bleeding and blistering, if not calomel; the father asked him if he could prescribe nothing better,—he said he could not,—‘I then must,’ said the father, ‘apply to a physician who can.’ He sent for Dr. Downing, who treated him on the principle laid down in this work, and it soon recovered.

“A little patient,” says a writer, “was reduced to copious and repeated bleeding for croup. There supervened a state of irritability of temper, so that, when greatly exhausted, it made great efforts to scratch, bite, and beat its attendants. This state of agitation continued until the powers of life were gradually exhausted.”

I might go on and speak of the effects of the loss of blood in inflammation, and every other disease; but the limits of this work will not permit, and I must leave it for others hereafter further to enlarge upon, and to illustrate.

SECTION IX.

TREATMENT OF THE EFFECTS OF LOSS OF BLOOD.

It is not my design in this place to treat much upon the curative effects of the loss of blood. This part of the subject is reserved for another section of this work. I will, however, speak of the curative effects in general.

1. *Posture.*

When fainting occurs, which is so common in bleeding, the patient should be laid upon the floor, bed, or in a recumbent position, which more readily admits a return of blood to the head and brain.

2. *Stimulants.*

Administer spirits or brandy, or which is better, ten drops of the spirits of hartshorn in a little spirits of lavender.

3. *Application of Water.*

A small quantity of water may be dashed in the face.

4. *Volatiles.*

Camphorated spirits, or hartshorn, may be applied to the nostrils and face. If reaction does not take place soon, the feet and surface may be bathed in warm water.

5. All tight bandages should be removed.

6. *Air.*

Few persons should be permitted where the patient lays. The doors or windows should be opened, that there may be a free current of air.

7. When the patient is recovered from fainting, a restorative course of treatment must be instituted. Wine or wine bitters may be given, and a very nutritious diet recommended.

8. *Anodynes.*

Where there is great irritability of the nervous system, exhaustion, delirium, &c. anodynes may be prescribed. The tincture of hyoscyannes has an excellent effect.

9. *Sinapisms.*

Mustard plasters may be applied to the feet and to the nape of the neck.

10. *Laxatives.*

The bowels must be kept regular by aperient or laxative medicines.

11. *Quiet or Repose.*

In most diseases arising from loss of blood, the person is very susceptible of noise, and to disturbance of any kind. Quietude and rest therefore should be strictly enjoined.

SECTION X.

CONCLUDING REMARKS.

In concluding this Chapter on the morbid and dangerous effects of blood-letting, I anticipate the remarks of an objector or enquirer, "Do you then reject bleeding in every disease?" In answer to which I have to observe, that ever since I commenced the practice of medicine, I have witnessed the effects of bleeding in different diseases. The practice has been so popular, and recommended by such high authority, and been adhered to by physicians for such a great length of time, that I concluded to follow it until I satisfactorily ascertained the effect of it upon the system. At one time, I even took a bleeder with me in my visits to my patients, and in some degree followed the footsteps of Dr. Sangrado, and bled almost every one of them. I soon found that I injured, instead of benefitted them, and although I discontinued the practice of bleeding so constantly, and so indiscriminately, yet I have for years occasionally resorted to it, till more recently I have laid aside my lancet, and it is now rusting in its scabbard. It is true my students sometimes bleed patients who *insist* upon its being done, but this is not in conformity with my practice. I can fulfil *every indication* for which bleeding is practiced, by the *substitution of other means more rational, natural, and congenial with the system*; and therefore, after a most extensive observation and practice at the bedside of the patient, I must as an honest man, whatever may be the opinion or practice of others, adopt the following maxim—

SELDOM OR NEVER BLEED.

CHAPTER IV.

THE KNIFE, OR ABUSES IN SURGERY.

"What a sarcastic, what a damning catalogue of *great* operations, performed within these last few years, might a diligent cynic compile for the gratification of the world."

JOHNSON.

SECTION I.

OF SURGICAL OPERATIONS IN GENERAL.

THE limits of this work will not permit a full investigation of this part of the subject, or that which relates to abuses in surgery. I shall, however, give an abstract or outline of our views.

Within some years past, it has become very fashionable to attempt to cure a great variety of diseases by the knife, or by manual operations, but with what propriety or rationality, I have never yet been able to determine. I cannot reconcile the propriety of it with any indications of nature, or with physiology, anatomy, observation, or experience. It is true, perhaps, although I have seldom, or never seen an instance, that some diseases may be removed by a surgical operation. But this affords no reason why they should be so generally resorted to, for it is well known that diseases for which such operations are performed, are otherwise removed either by nature, or by other means. When we reflect for a moment upon the structure and organs of different parts of the system, we shall see why so little benefit, and so much injury results from operative surgery. Wherever any disease is seated, for which cutting is recommended, we shall see that there is, in general, such an intimate connection between it, and the surrounding healthy parts, that the knife cannot separate between them. It is owing to this, that those diseases for which an operation has been performed, so frequently reappears after they have been apparently extirpated.

The morbid and healthy vessels and fluids are so interwoven and connected together, and so freely inosculate with each other, that operations oftener exasperate than cure. This is exemplified in tumours of various kinds; the scrofula, white-swelling, cancer, fistula, &c.

Operations are acknowledged by all to be the opprobrium of surgery, and rather a disgrace, than credit to the operator. It ought to be the primary object of every practitioner to prevent the use of the knife.—But in this day, it is certainly not the case. Some of our noted surgeons express the most joyful sensations whenever they can obtain a subject for carving. It appears to be their delight to dissect and cut

human flesh; and there might be some excuse for it, were such operations indispensably necessary; but when it is a fact, (which has been demonstrated in scores and hundreds of cases,) that there is seldom if ever any necessity for them, we confess that we feel horror-struck and indignant, that mankind must continue to be tortured, mangled, and quartered, for those very diseases which have been so frequently cured by the most safe and mild means.

Dr. Johnson, editor of the *Medico-Chirurgical Review*, and physician extraordinary to the King of Great Britain, has the following pithy remarks on this subject:—"If operations, bloody, cruel operations, are looked on with admiration, it can only be by those who regard plague, pestilence and famine as beneficial also. No! operations are our opprobrium, our disgrace, not our proper and legitimate boast; the mere operator is little better than a human butcher by rule. There is too great a taste for the knife at present;—shame to those who encourage it;—woe to those who practise it, unnecessary operations bring discredit on surgery; unsuccessful ones, even when perfectly justifiable, inspire doubt and repugnance to it in the public mind. Patients who see or hear of their relatives or friends submitting to barbarous and frightful maimings, only that they might live for a month, or a week, feel no great relish for the knife, when its use might bring safety and a cure. What a sarcastic, what a damning catalogue of *great* operations, performed within these last few years, might a diligent cynic compile for the gratification of the world! But we have done, and we trust that these observations may not be without their effect."

In Dr. Gibson on bony tumours, page 136, 7, is the following to the same import:

"Whoever attends an *European Infirmary*, will be struck with the diversity and multiplicity of operations, performed upon the most trivial occasions. Will it be credited when I say that the illustrious founder of American surgery, during a practice both hospital and private, of thirty years, and more extended than that of any other individual of our country, has hardly ever had occasion to resort to amputation? It may be asked what became of his patients? I answer, they have been cured by general and local means. Doctor, said a surgeon of Pennsylvania hospital, to a distinguished practitioner of a neighbouring city, what would be done in your town with such a leg? We should cut it off, was his reply. We can *cure* it *here* without, rejoined the other. "In a certain London hospital," says Dr. Gregory, "a patient was under the care of the physicians, on account of a very bad leg, which baffled their skill, and appeared to them almost hopeless; they therefore requested a consultation of the surgeons, to examine the leg and to decide what should be done with it. The surgeons accordingly met, examined it, consulted about it, and resolved *nemine contradicente*, that the leg could not be saved, and ought to be cut off. They cut it off without delay. But, strange to tell, the physicians, at their next visit, on examining the patient, found to their great astonishment, the supposed hopeless leg, as fast to his body as ever it had been.

The puzzle was soon explained. It happened that the man had *two* legs, both of them very bad; one the physicians thought they could save,

the other they despaired of. There being but right and wrong, it was not very marvellous that the consultation took the wrong. Both physicians and surgeons I believe, were a little disconcerted at that *quid pro quo*; and as it was thought rather a strong measure to cut off both of the man's legs, they exerted themselves to the utmost and saved the leg which should have been cut off: so that after all the poor man was but one leg out of pocket.

As I was not an eye witness of this edifying transaction, it is proper to give some notion of the genealogy of the story, which is very short and simple. I have it from a reverend clergyman, who had it from one of the physicians concerned, and who is now one of the most eminent of his profession in London. I know both the clergyman and the physician intimately; I know them both to be men of veracity and men of sense; and I have no doubt that the facts were just as I have stated them.

These remarks may appear, perhaps, irrelative, but I am satisfied of their importance, and shall be gratified if they tend to check the disposition, so prevalent among surgeons, to use the *knife*; or contribute in a single instance to alleviate pain, or remove diseases by milder or more appropriate means."

The following cases are related by a physician of this city. It shows still further, the fondness of surgeons to perform even unnecessary operations.

"Yesterday, in passing down Delancy-street, my attention was arrested by a number of persons collected together in consequence of an accident which had just occurred to a lad by the name of William Thompson, about twelve years of age. After he had been conveyed to the residence of his mother, No. 91 Delancy-street, I took the liberty of calling and making some enquiry respecting the nature of the accident. I there found some half dozen of physicians or medical students, who in a very superficial manner were examining the wound of the boy. It was pronounced a compound fracture of the lower, and a simple fracture of the upper arm. The ends of both bones were seen protruding through a large wound; although the blood circulated freely below it, and the motion of the hand was not lost. The injury had been done, I was informed, by the machinery, in a manufactory for cutting glass. All the physicians or students present immediately decided, with the exception of one, the oldest and most experienced, that the arm must be amputated. This physician stated that the wound though extensive might be cured. At any rate, he thought an attempt ought to be made to effect it; that there would be no more danger in making a trial than would result from amputation, and he quoted for authority sir Astley Cooper, and spoke of the danger of an operation so soon after the injury. He concluded by asserting that he had cured a wound equally as serious and unfavourable. Although the opinion of this physician was respectfully solicited by the principal surgeon, the enmity of the others was so much excited at the opposition he made to the proceedings, that they tried every means, in the most clandestine and disgraceful manner, to rid themselves of his presence. The proposition to heal the wound was not listened to. The physicians began to make preparation to remove

the arm, by displaying before the eyes of the unfortunate lad, numerous surgical instruments!!! The scene resembled a number of butchers eager to shed the blood of a poor animal.

The boy strenuously and perseveringly objected to the operation; and called some around him to prevent it being done. His cries, entreaties and agonies were truly heart-rending, and convulsed his whole frame. He was firmly held by them, however, till the arm was cut off, not below the elbow, where it ought to have been, as I was forcibly impressed if at all, but above.

My object in this communication is to express my conviction, (and I judge from common sense and common observation) that *this arm could have been saved* as intimated by the physician above alluded to. I have seen a wound apparently as bad, if not worse, cured by him, after it had been decided that amputation must be immediately performed. I have no doubt that many limbs are taken off, which if left to nature and judicious treatment might be preserved.

A few years ago a person was expelled from the New-York almshouse, because he would not consent to have his leg amputated. He succeeded after three days of great toil and distress in reaching the city, a distance of only three miles. He then began to prescribe for himself, and in a few months recovered the use of his legs, and can now walk perfectly well. Ought not these "*stubborn facts*," outweigh any and every theory leading to an opposite practice, however plausible, or founded on authority however high? If there is an improved system of practice, and I have the fullest evidence of the fact, by which we may be cured of our diseases without the loss of our limbs, or without being "quartered and mangled," ought it not to be investigated and patronized by every humane and philanthropic person, however opposed they may be by the *illiberal*, the *interested*, the *envious*, or the *prejudiced*?

These cases are too painful to be contemplated with ordinary patience by any humane reader. The anxiety which we have ourselves witnessed in some *jujune* practitioners of surgery, to flourish the scalpel about the limbs of a maimed patient, for the sole sake of showing off their professional adroitness, has on more than one occasion induced feelings of exquisite and unmentionable anguish.

There are thousands of juvenile slaughterers, *secundum artem*, who are always longing for chances to display their *callous philosophy* and *cunning agility*, in slashing off a bruised arm or sawing away a shattered leg, without condescending to wait for any of the efforts of nature.

An instance is within our own recollection, somewhat analogous. The circumstances occurred in Massachusetts, four or five years since, and can be proved by the testimony of hundreds. A little girl, about four years of age, while riding in a gig with her parents, fell out of the vehicle and the wheel immediately passed over one leg and one arm of the child, crushing horribly the bone of the thigh and that of the upper arm. A council of surgeons resolved that the wound was past all remedy, other than immediate amputation, and while preparing for the operation, a noted bone-setter, named Sweet, illiterate, coarse, better acquainted with nature than art, saw the patient and remonstrated with effect against the proposed mutilation. The surgeons of course abandoned the sufferer

to her fate, and retired, pronouncing however sentence of death upon her. The bone-smith, who pretended to be nothing more than one of nature's journeymen, bandaged the crushed limbs, without even using the wooden splints or frames, considered so essential by all scientific chirurgeons. Thus nature was left to work itself out of its own predicament; and by dint of careful, simple, and gentle treatment on the part of her attendants, the little patient in a few weeks was restored to her overjoyed parents, whole and sound, and is at this day one of the most sprightly children of her age, enjoying the free use and original shape of all her limbs. We are by no means inclined to disparage the noble science of surgery, we view it as even the *most* honourable of professions; but we would deprecate that precipitate zeal in imprudent practitioners, which in its earnestness to make exhibitions of skill, lose sight of the grand truth, that art is but nature's auxiliary. In young persons, especially, the utmost caution and hesitancy ought to be observed. Such is the practice with all *experienced surgeons*, before applying the cruel instruments, whereby misery and deformity are *forever entailed* upon the unfortunate sufferer.

The count La Salle, in one of his papers addressed to the academy des arts at Paris, thus expresses himself, in relation to the practice of surgery among the Indians. The paper is dated, August 10, 1565.

"In my travels through the wilds of America, I visited most of the Indian tribes, which populate the regions of the west. I commenced my pilgrimage at the mouth of the St. Lawrence, and ended it at the passes of the Mississippi. A nobler race of beings I never witnessed; and I was surprised when I found that though unacquainted with any of the sciences, they were masters of the art of surgery. During my travels I found a number of the aborigines, who had been wounded and mangled in the wars, but I never found one who was in the least deformed, by the fracture of bones, and the numerous accidents to which Indian warfare is liable, not a single amputation. I had noticed in most of the hospitals of Europe, that but few of the inmates, who had been confined came out, without being lame and deformed; and when I recollected this, I expressed my astonishment to the chiefs of the tribes that the invalids perfectly recovered the use of their limbs, and did not bear any of the marks of previous disaster. To my observations one of the chiefs replied, "you have men to mend limbs, who are taught by men to do so; we obtain our knowledge from the Great Spirit. We are perfect for our knowledge comes from the clouds; yours comes from man only." I confess that I was thunderstruck with the reply; but I could not but admit the justice, accuracy, and pungency of the remark.

The celebrated missionary John Zimmerman, as early as the year 1620, made a voyage to Patagonia, under the auspices of the Moravian church, and in one of his letters to the Synod, took an elaborate view of that people, and from the which, we make the following extract.

"I was not more surprised than delighted to find among this people, men who were practically and theoretically acquainted with surgery, though they were unacquainted with the terms and phrases which are employed by civilized nations. I enquired of them how they became acquainted with the art. their reply was our God forms not his mortals

without intelligence, and he has wisely ordained that we should all possess the capacity of supplying our wants. He that formed us, endowed us with the necessary knowledge to enable us to heal our wounds, and restore our fractured bones."

Were I disposed, I could proceed and relate hundreds if not thousands of the most inhuman, barbarous, bloody, and fatal operations both in Europe and America; and that too for those very diseases which nature often cures, without any assistance from art. It may be that *occasionally* an operation removes a disease. But if so, this is blazoned to the world, and brings great fame to the operator, when perhaps the scores of cases which he has butchered out of the world, are kept silent. Indeed I have sometimes thought the more patients a surgeon kills by formidable operations, the more popular he becomes. I never would object to any operation, were I convinced that there was no other alternative; but when I see persons cut and mangled and destroyed for complaints which I have so frequently cured, if I did not raise my warning voice against such practice, and express my indignation, I should be destitute of the least spark of humanity and philanthropy.

SECTION II.

OF OPERATIONS IN PARTICULAR.

1. *Amputation.*

It is customary to amputate a limb when mortification takes place, but it is directed not to remove it, until a line of demarcation is formed between the mortified or dead, and the living or sound flesh; assigning as a reason, that if it is done, the stump will slough, or that the disease will return.

Now I ask in the name of reason, common sense, and philosophy, where is the propriety or necessity for amputating a limb for mortification, or any other disease, when it has been stopped or arrested. In this case according to the very directions given, or principles laid down, the limb will if left to nature alone be saved.

The extract already quoted from Gibson, proves that a surgeon who understands the healing art, may practice, perhaps all his life time without cutting off a single limb. How then can surgeons in this day reconcile their cutting and carving system with their consciences, or with correct principles of the science of medicine.

It is a very common circumstance for persons to apply to us for the treatment of some disease for which amputation or an operation has been proposed, and I now do not recollect a solitary case in which we have not been successful, where our prescriptions have been followed; and a great share of the abuse and calumny which has been heaped upon the author of this work, has arisen in consequence of having cured those very diseases for which operations have been proposed, and recommended as absolutely necessary. I must however, here state, that it

is alleged that some improvements have taken place within a few years past, in operative surgery. A medical gentleman informs me, that not one half the limbs are now amputated that were some years ago.

2. *Compound Fractures and Dislocations.*

It has been very customary to amputate for compound fractures and dislocations, but this is seldom, if ever necessary. The worst cases of which I have any account may be cured; and indeed, amputations now are not so frequently performed for these accidents, as they were some years ago.

Sir Ashley Cooper proves conclusively that these accidents can be cured without amputation. Why then do other surgeons, in this day, remove a limb for compound fractures or dislocations?

But I humbly trust that a new æra in medical science will soon dawn upon the world.

3. *White Swelling.*

It is customary to amputate for white swellings. This is truly a cruel, unnecessary and shocking practice. How must the hearts of parents bleed to see the limb or limbs of their beloved children amputated or cut off for a disease, that can be as infallibly cured, may I not add, as water will extinguish fire.

4. *Operations for Cancer.*

It is recommended by authors and lecturers both in Europe and America, to use the knife for cancers in the female breast, and other parts of the body. But how this practice has so long prevailed, in face of all the facts on record, I cannot divine. I cannot account for it in any other way, except on the same principle that error always prevails. I know by a life's time experience, that the method of extirpating cancers with the knife, is not attended with success; but on the contrary, I have found that it aggravates the complaint. I have been often called to treat the disease in all stages, both before, and after excision, and therefore, I consider myself a competent judge, and now have to state that this operation is uncertain, ineffectual, and generally renders the complaint worse, and therefore ought to be abandoned, and other means substituted.

Among all the operations performed for cancer of the female breast, I have never known a solitary cure performed. Dr. Alexander Munro of Edinburgh states, that he has been present at the extirpation of sixty-two cancers of the female breast, and not two of the individuals remained free of the disease a year afterwards. Is there then any encouragement, or any authority for continuing this barbarous practice?

The method that we pursue in the treatment of this disease, is altogether better.

Attempts to cut a cancer, may be compared to the act of cutting down a tree and leaving the roots to sprout. It grows with renewed vigour.

5. *Fistula.*

A horrid operation is now recommended, and performed by surgeons

for the cure of this most obstinate and unpleasant disease; but the success of it is very little better than that for cancer. It seldom or never effects a cure. I have had them apply to me, after they had been operated upon a number of times, after they had been cut and mangled, and after the disease had been thus exasperated; and have entirely cured it, without any surgical operation.

The operation consists in passing a bistoury or knife up the sinus or opening, and then cutting it entirely open; after which, lint is applied without any other applications. Now it requires but a small share of common sense to perceive that the act of making one common opening with the *intestinum rectum*, is not sufficient to cure the disease. It does not eradicate the callus, which constitutes the very essence of it. The method we adopt, is to excite a preternatural discharge, which produces this effect, and thus removes the complaint.

I have not yet seen a single case, no matter of how long standing, or how inveterate or deep seated, provided the general health has not been too much impaired, but I have been enabled to cure, and that too, where our most popular surgeons have failed. In proof of this, I can refer any person to numerous cases in every part of the city; and to facts of this kind, we depend for the success and merit of our work and system of practice.

6. *Hernia or Rupture.*

When a hernia or rupture becomes apparently irreducible or strangulated, after a few attempts to reduce it, and without waiting long enough to know if it can be reduced, an incision is made down to and through the stricture, and the contents of the sac returned. It is possible that there may be cases in which this operation may be necessary; but I have never yet found any such. I have reduced the worst case, I have ever seen; and when we reflect that this operation often proves fatal, ought we not to substitute a course of treatment which will obviate the necessity of it.

7. *Aneurism.*

There are few diseases more painful or dangerous than an aneurism, or a partially ruptured blood vessel, producing a pulsating tumour, and there are few if any, in which the knife proves more dangerous or fatal. Tying the artery above the tumour, may, when it is on the extremities, effect a cure, but when some great artery is the seat of the disease, an operation almost invariably proves fatal. I have successfully treated an aneurism of the femoral artery, when the patient was told that without an operation she must inevitably die, and I am confident that if such an operation had been performed, the patient could not have survived it. This operation proves fatal from various causes; first, from irritation; second, from inflammation; third, from mortification, and consequently hemorrhage. Out of very numerous operations which I have seen detailed by authors, or which has come under my own observation, (and which I might here insert if I had room,) nearly all proves fatal or exceedingly injurious.

I am of the opinion from my experience in the treatment of this com-

plaint, that many more would recover if left entirely to nature, than by a surgical operation.

8. *Trephining.*

There has been much dispute and controversy among surgeons respecting the propriety of trephining for injuries of the head. Some highly extol, while others deprecate it. The surgeon of the hotel Dieu of Paris, has stated that almost every one who was admitted into the hospital for injuries of the head, and who was trephined, died in consequence, no doubt, in a great measure, of the operation. Even sir Ashley Cooper, the oldest and most popular surgeon of London, and who cannot be accused of departing much from common established surgical practice, recommends the operation of trephining to be very rarely performed. He uses in cases of depression with fracture, simply an elevator to raise the bones. He relates a case in his lectures, where some surgeons expressed astonishment that he refused to trephine, and yet the patient did well.

A surgeon told me the other day, that he insisted upon trephining a child who had received an injury of the head, but as the mother refused, it was omitted, and the child rapidly recovered. An operation very probably would have killed it. Mr. Abernethy mentions many such cases.

The act of boring one hole in the head to cure another, seems to be very irrational, and absurd. I have had patients who have received almost every kind of injury of the head, and I have found no difficulty in curing them without the operation of trephining; a single case excepted, and which was hopeless from the commencement. I had one case of fracture with depression of such a character, that I even doubted whether he would recover with or without an operation; he was thrown into convulsions, lethargy, &c. from a wound made in the right parietal bone, by a stone. Means were taken to reduce the inflammation, the irritation was allayed by anodynes, and the man recovered without bleeding, or trephining. A depression still remains in the skull an eighth of an inch deep. Cases are on record almost without number, where recovery has taken place in a similar manner.

9. *Lithotomy or Operation for the Stone.*

When we reflect upon the number that die from this operation, being about one in five, and the liability to a relapse, even if there was no other means of removing it, it would remain a question, whether a person suffering with the complaint, had better submit to the danger and excruciating pain of the knife, or take palliatives, and trust the disease to nature.

But it is sometimes cured by medicine, and when it cannot be, it may be cured by the new process adopted in Europe of perforating and destroying the stone in the bladder, without any cutting whatever.

It would be interesting to relate the vast number of fatal cases which have resulted from the operation of lithotomy. An acquaintance of mine was operated upon for the stone, but when an incision was made into the bladder, none was found. A surgeon a short time ago, stated that a child was afflicted with a stone in the bladder, and he proposed to cut

for it. Some diuretic medicine was given by the father secretly, and the child soon recovered.

10. Operation for the Cataract.

I have never yet seen a single case of cataract cured by an operation, but I have seen many eyes injured, if not ruined by it. Some state that soon after the operation, they received some benefit, but the disease soon returned, and was even worse than ever. One writer states that he ruined a hat full of eyes, before he could operate with *any kind of success*. He ought to have said that he had ruined a hat full of eyes, and after all could not *cure* a single case by the operation.

A person informed me the other day that he had submitted to an operation for a cataract, and it not only made the eye worse, but caused inflammation in the eye that was sound, and which endangered the sight of it.

SECTION III.

CONCLUDING REMARKS.

I cannot here further enlarge upon the use and abuse of the knife, but will close the chapter with the remarks of the late professor Godman on this subject, with some that I made a few years since in reply to an attack made upon our practice, by a physician in this city, in the *American Lancet*.

Are there not gross abuses of the knife in the practice of surgery, and is it not productive of more injury than good?

It is now generally admitted by the most judicious physicians and surgeons, that too many operations are performed, that many have recovered of maladies for which the knife was said to be the only remedy. Again, it is universally known and admitted, that many die of capital operations, or are mutilated or crippled for life, who if left entirely to nature might have lived comfortably for years. This has occurred in amputations, lithotomy, aneurisms, cancers, tumours, fistulas, injuries of the head, white swellings, hernia, cataract, and other diseases. Numerous facts can be adduced to substantiate this assertion. I do not say there are no cases in which an operation is necessary; but in a vast majority I know by observation and experience, they can be dispensed with. That celebrated surgeon, Mr. Abernethy of London, positively declares every time he commences his lectures, that "it is owing to our ignorance that instruments or operations are necessary in any case."

Remarks of the late Professor Godman on the Knife.

The following judicious discrimination, is from the pen of the late professor Godman, and does honour to his head and heart.

"The difference between a surgeon and a mere operator, may be estimated by contrasting them. The *surgeon* inquires into the causes, and removes the consequences of constitutional and local disease; the

operator inquires into the willingness of his patient to submit, and resorts to the knife. The *surgeon* relies on the restoration of the healthy actions, by regimen and medicine; the *operator* relies on himself, and cuts off the diseased part. The *surgeon* reflecting on the comfort and feelings of his patient, uniformly endeavouring to save him from pain and deformity: the *operator* considers his own immediate advantage, and the notoriety he may acquire, regardless of other considerations. The *surgeon* reluctantly decides on the employment of instruments; the *operator* delays no longer than to give the knife a keen edge. The *surgeon* is governed by the principles of the science; the *operator* most generally by the principle of interest; one is distinguished by the number he has saved from mutilation, and restored to usefulness; the other by the number of cripples he has successfully made."

"The *surgeon* is an honour to his profession, and a benefactor of mankind; the *mere operator* renders the profession odious, and is one of the greatest curses to which mankind among their manifold miseries, are exposed."

I anticipate the same objection here in relation to the knife, that I did in the preceding chapter on the use and abuse of the lancet "Do you then reject all operations?" In reply to which I would state, that I have seen the effects of various operations performed in the New-York hospital, as well as in private practice. I have carefully noticed the result under different circumstances, and for different diseases, and after the most mature reflection and deliberation upon the subject, as an honest man, I am under the necessity of adopting the following maxim—

SELDOM OR NEVER OPERATE.

CHAPTER V.

OBSERVATIONS OF DIFFERENT INDIVIDUALS ON THE PRESENT PRACTICE
OF MEDICINE.

SECTION I.

1. *Remarks of Dr. John J. Steele, on Mercury, the Lancet, and the Knife, being a part of an address delivered at the New-York Reformed Medical College.*

“THOUGH there be some who shut their eyes against light, and debar truth from their reception, yet thanks be to Heaven, the mass of the good and the truly wise, have ever been ready to receive both, when fairly and honestly presented.

In the following lecture, truth, honesty and benevolence shall influence the speaker. He shall only exhibit his own views, founded upon experience, matters of fact, and common observation. He too, let it be recollected, was early disciplined into the old school of medicine, and for many years used calomel, the lancet, and the knife, without compunction or reserve.

Every man who thinks, or reflects for a moment, upon the frail nature of man—the diseases which afflict him, and the system of practice pursued by modern physicians, must come to the conclusion, that the inordinate use of mercury, and other mineral poisons, the abuse of the lancet and the irrational use of instruments in surgery and midwifery, are fruitful sources of disease and death to thousands. This is an evident fact at first sight. But follow up the subject—call to mind the numerous instances that have occurred in your neighbourhood, of persons who have been poisoned by mercury, killed by bleeding, or butchered into eternity by the knife in surgery, and the forceps in midwifery, and then say honestly, what you think of the present system of practice.

An inquisitive people must discover that the old system is both defective and dangerous. What disease can its disciples cure? Examine, critically, what they prescribe, and you will find their remedies consist of mercury, antimony, lead, bleeding, &c. all of which are disease-creating remedies, and all of which act in direct opposition to the laws of our animal nature. Is then such a course of conduct, in relation to one of the most important objects of human life, to be sanctioned by popular opinion? The people certainly are awaking out of sleep on this all important subject. The light of reform is spreading far and wide, and a still small voice begins to be heard from one end of our country to the other—*Physicians, you are in error—Your indiscriminate use of mer-*

cury, the lancet, and the knife, are adding to, rather than alleviating the sum of human misery! Reform! Reform the abuses of the healing art, and endeavour to become a blessing to the human family. This voice of enlightened public opinion begins to wax louder and louder, and if unheeded by medical men, sentence will soon be passed upon them from the bar of public opinion.

Every one who has given the subject of medicine the least attention has discovered that, first, the common mode of practice is unequal in contending against disease;—2d. That it is the most easy and profitable to the physician who pursues it;—and thirdly, that it is dangerous to the sick. It is unequal, because upon a close examination, you find that it rarely if ever cures a deep-seated or malignant disease, and that most of those who do recover, recover from constitutional vigour. It is profitable, because a lancet and a pound of calomel will not cost two dollars, and the neat profits independent of visits will exceed one hundred, and moreover, how easy for a medical dandy to carry his lance in one vest pocket, and his calomel in the other. But it is dangerous. Every man upon a moment's reflection must admit the high importance of the blood in the animal economy; and the reasonableness of the supposition, that no more blood is formed in our system than is necessary, and that upon the proper quantity of blood depends the measure of health we enjoy. Now if it were possible for man to generate too much blood, or that in certain states of diseased excitement, the removal of disease depended upon a diminution of the volume of blood, would not the God of nature have provided such an outlet?—none however exists from the blood, for all natural disease-removing processes, are carried on through the medium of the stomach, the bowels, the kidneys, and the skin. Besides bleeding in every case both of health and disease, in proportion to the amount taken, destroys the balance of circulation, and robs the system of its most valuable treasure and support; this balance must be restored, and this treasure replaced before a healthful action can be complete in the system.

Again, the old practice is dangerous, because its remedial agents are unnatural mineral poisons. The bad effect of calomel or mercury upon the system is not sufficiently known, or admitted. It exerts a most powerful influence upon the liver and other glands; it is one of the most fruitful causes of liver complaints, consumptions, kings-evil, dropsies, dyspepsies, &c. that exist in the present day. Its use is now general as a worm medicine, and it is the champion of modern physicians in the cure of every disease. To prove this, we need only quote the words of a learned professor in one of the old schools, when lecturing to a class of upwards of one hundred students. "Give me," says he, "calomel in the one hand, and the lancet in the other, and I am prepared to cope with disease in every shape that it may attack the human family." What a world of ignorance is contained in such a declaration! And oh! what an amount of moral turpitude and crime is contained in such a precept, when delivered, and enforced under such circumstances!!

I know full well the effects of mercury upon the human system, for I have tried it in every shape, and for almost every disease, and have uniformly found it attended with risk, and if pushed to a salivation,

absolute consequences of a dangerous character either open or hidden, were produced. This fact is no secret to the physicians who administer it, for they admit amongst themselves and in their writings, that mercury does produce disease of the most disagreeable and dangerous character. Why then persist in the use of it? But if they will persist in the face of all the evidence they have, and in defiance of all moral obligations imposed by the sixth commandment, surely the people cannot be so infatuated as deliberately to swallow down the seeds of certain disease and death. Nay, the mass of them will halt and consider.

The knife is another source of immense mischief to the human family. Every day brings us tidings of some unfortunate man or woman being ushered into eternity through the means of a surgical operation. I could name twenty cases which have occurred within a year, when the persons were in a common degree of health, at the time the operations for different purposes were commenced, and all of whom died in less than a week after undergoing such operations. How melancholy would the reflection be, if from an absolute necessity, physicians were compelled to operate in this manner, and when the fact was known that such operations were generally followed by death. But what different feelings inspire us, when we reflect that most of those operations are undertaken and performed, *without any necessity*, and only to exhibit to the world the manual surgical tact, of a vapouring, iron-hearted M. D. That in nine cases out of ten, when operations are performed, and death ensues, the patient might have been cured, or sensibly benefitted, we have not the shadow of a doubt. For as professor Abernethy says, "It is owing to our ignorance that the knife is used in any case."

Is it asked what will we substitute for mercury and the knife?—we answer that for mineral poisons, we substitute the vegetables that grow in Nature's Garden. We have tried them and we find them abundantly successful. Moreover we find them of such variety in strength, and medicinal qualities, as to answer every indication disease presents, and to accomplish all, and much more than the conjoined use of calomel and the lancet. Diseases which have been given up by mineral practitioners, have been cured by vegetable prescriptions both here and elsewhere. A vast number of cases denominated surgical, in which deadly operations have been recommended, have been completely cured by the Reformed Practice. Indeed in no department of God's vast scheme of goodness to man, is that goodness so strikingly exhibited as in the arrangements of medicinal plants to restore health and remove obstinate diseases. All that is required of us is to know the medicinal quantity of each plant, and the disease it is designed to cure, then when we are sick, we may put forth our hand and take it as the boon of Heaven.

It becomes our duty to investigate the quality of each plant from the forest tree down to the humble ivy. And in the performance of this duty, I trust we have the prayers of the philanthropist, and the patronage of every good man. It is a work of vast importance to the human family. And if we have found substitutes for minerals, the lancet, and the knife, surely the world will not withhold from us that respect

or patronage which so great a discovery demands. Some physicians of the old school will jeer and mock, and lie, and slander, but their efforts to put down our system, or the Reformed Medical Society of the United States will be in vain. The mass of the people are on our side, they are our defence, our judges, and rewarders. Besides the object of our pursuit is, above all others, calculated to cheer us in our researches, and comfort us in our privations; having no less object in view than the redemption of the rising generation, from the evils of mineral poison and blood-letting, and our army, navy, and other unfortunate fellow-beings, from the horrors of the scalpel and amputating knife. Let us go on then and do our duty, fearless of all that the enemy can do.

SECTION II.

REMARKS OF DR. ANTHONY HUNN OF KENTUCKY, ON THE SUBJECT OF REFORM IN MEDICINE.

“ I have laid before the public, only a few of the many existing facts, which press themselves upon the mind of an observing thinker, and must inevitably lead him to the conclusion, that the present medical practice is so far from being beneficial, as even to create a serious doubt, whether it be not in the whole, detrimental and injurious to mankind. This is owing to the want of *truth* in all our system, of medical science. A system should consist of just, logical deductions drawn from familiar, known indubitable and undoubted *facts*. Instead of this, all our systems are either false conclusions from mere imaginary whims, begged principles, or mere suppositions; or even false conclusions, from erroneous principles. All systemisers pretend to build upon facts; but their facts are *pressed* and *whipped* into their service. The doctor first spins his system out of the cobweb of his fancy, and afterwards squeezes some facts into forms resembling proofs of it, and, very honestly shuts his eyes against all such facts as are at variance with his beloved air castle. He creates distinctions, when in nature all is whole, and forges classifications, when in nature all swims together. Thus Boerhave, Cullen, Brown, Darwin, Staehl—are all blind leaders of the blind, and the young physician, who thinks he has in his notes and books a remedy for every disease, when he comes to the sick bed, finds all a chaos; no rule will apply; he looks in vain for the vaunted effects of his cure-all nostrums, either forsakes in disgust a practice, which may lead him to manslaughter, or from experience chalks himself out some dictionary: This is good for that; or that is good for this; and becomes a *quack*. For practice without system is the very definition of quackery. Another, and not less efficient cause of the falsity of our medical systems is the prejudiced respect, for ancient and modern celebrated *names*. The most important data presented to us by modern improvements in physiology and anatomy, (the marrow of the medical science) are bartered away for the *dicta* of Hippocrates, Galen, Boerhave, Cullen, and Rush; and thus the lancet, or calomel, or cold bath, or opium, or salt of tartar; all in

their turn, become *panaceas*, (cure-alls) with the accession of every new, popular profession, and

“ For the king’s offence the people die.”

I offer to the public a *new system of medical science*, which I have formed conscientiously clear of all those impediments, and which is confirmed in its salutary effects, by the experience of a life time’s practice.

But I anticipate a question, which has been put to *Moses*, to *Socrates*, to *Gallileo*, to *Columbus*, to every man, that has presented the face of a *reformer*, and which green-eyed envy never yet has failed to accompany with the sneer of detraction: “ *Who are you, that you dare to presume to know more than we?*” Free from that cowardly, bastard modesty, which trembles to own its competency before the scorn of malevolence, I frankly answer as a freeman, that from my sixth year I was dedicated to the sciences by a father rich enough to give three sons besides me, a full chance of the highest scientific education that Europe affords. At a riper age I studied for five years, (not for half a year, “ off and on”) in the celebrated academy of Jena in Saxony, successively theology, law, and *medicine*. The last as my predilection, I chose for the employment of my life. I graduated as doctor of medicine and surgery (as my diplomas show) in two universities on the continent, *Jena* and *Erfurt*, profited afterwards by visiting the universities of *Erlang*, *Gottingen*, *Keel*, enjoyed the lectures of *Reich*, *Stark*, and of the most eminent physician of the present age, *Hoffland*. Then I embraced the opportunity of the assistance of my mother’s relations in *France*, to attend the surgical operations in the *hotel de dieu* in Paris, practised afterwards three years in *Amsterdam*, and embarked for America, where I have had for thirty years the amplest of opportunity to effect a reformation in the science of medicine, and of studying the *power of nature* on the sick bed. Being acquainted with ancient and modern languages, I have read till twelve every night, every author of note, and made extracts, and now I am near sixty years of age, and am the very man who offers his services to the sovereign people of America.”

SECTION III.

OPINION OF THOMAS JEFFERSON ON THE STATE OF MEDICINE.

I have given the views of some physicians on the present practice of medicine. I will now subjoin those of Mr. Jefferson, who did not belong to the profession, but who by the bye possessed an extraordinary mind, and who was fully competent to judge correctly upon this subject.

“ We know from what we see and feel, that the animal body is in its organs and functions subject to derangement, inducing pain and tending to its destruction. In this disordered state, we observe nature providing for the re-establishment of order, by exciting some salutary evacuation of the morbid matter, or by some other operation which escapes our imperfect senses and researches. She brings on a crisis by stools,

vomiting, sweat, urine, expectoration, &c. which for the most part ends in the restoration of healthy action. Experience has taught us also, that there are certain substances, by which, applied to the living body, internally or externally, we can at will produce the same evacuations, and thus do, in a short time, what nature would do but slowly, and do effectually, what perhaps she would not have strength to accomplish. Where, then, we have seen a disease characterized by specific signs or phenomena, and relieved by a certain *natural* evacuation or process, whenever that disease occurs under the same appearances, we may reasonably count on producing a solution of it, by the use of such substances as we have found, *by experience*, produce the same evacuation or movement. Thus fulness of the stomach we can relieve by emetics; diseases of the bowels, by purgatives, &c. &c. Here then the judicious, the moral, the humane physician, should stop * * * * * But the adventurous physician goes on, and substitutes presumption for knowledge. From the scanty field of what is known, he launches into the boundless regions of what is unknown. He establishes for his guide some fanciful theory, of corpuscular attraction of chemical agency, of mechanical powers, of stimuli, of irritability accumulated or exhausted, of depletion by the lancet, and repletion by mercury or some other ingenious dream which lets him into all nature's secrets at short hand. On the principle which he thus assumes, he forms his table of nosology, arrays his diseases into families, and extends his curative treatment, (says he) by analogy, to all he has thus arbitrarily marshalled together.

I have lived myself to see the disciples of Hoffman, Boerhave, Staehl, Cullen, Brown, succeed one another, like the shifting figures of the magic lantern, and their fancies like the dresses of the annual doll-babies from Paris, becoming, from their novelty, the vogue of the day, and yielding to the next novelty their ephemeral favours. The patient, treated on the *fashionable* theory, sometimes gets well in spite of the medicine.

The medicine, therefore, restored him, and the young doctor receives new courage to proceed in his bold experiments on the lives of his fellow creatures.

I believe we may safely affirm that the *inexperienced* and *presumptuous* band of medical tyros let loose upon the world, *destroys more human life* in one year, than all the Robbinhoods, Cartouches, and Macheathes do in a century.

It is in this part of medicine I wish to see a reform; an abandonment of hypothesis for sober *facts*. The *first* degree of value set on *clinical observation* and the *lowest* on *visionary theories*. I would wish the young practitioner, especially, to have deeply impressed on his mind the real limits of his art. * * * * *

The *only* sure foundations of medicine are an intimate knowledge of the human body, and *observation* of the effects of medicinal substances on that. The anatomical and clinical schools, therefore, are those in which the young physician should be formed. If he enters with innocence, that of the *theory* of medicine, it is scarcely *possible* that he should come out *untainted* with *error*. His mind must be strong indeed, if rising above juvenile credulity, he can maintain a wise infidelity

against the authority of his instructors, and the bewitching delusion of their theories. * * * * * I hope and believe, that it is from this side of the Atlantic, that Europe, which has taught us so many other things, will be led into sound principles in this branch of science, the most important of *all* others, being that to which we commit the care of health and life.—*Letter to Dr. Wister*, Vol. IV. page 91.

CONCLUDING REMARKS.

After dictating the preceding chapters on the principles laid down in this work, I observed to my amanuensis, who, by the bye, is a graduate of the old school, and whose medical sentiments are in union with mine, that the principles here maintained, are so plain and clear, and yet so simple, that every person must see their consistency, and the truth of them. Does it not, I added, appear exceedingly plain and clear to you? He replied in the affirmative, as he had many times before, in expressing his opinions of them, often asserting that they would stand the minutest investigation; that it was impossible to overthrow or subvert them; yet at the same time there would be some physicians, who, in face of all the light and truth exhibited, would cavil, reject, and oppose. If they admit that these principles are correct, added he, they will *bleed to equalize the circulation*, and give *mercury as indications of cure*. In reply to this, I observed, that for such, there was no remedy. If there is not a *principle of honesty, uprightness, and integrity sufficient to receive the truth*, it would be as foolish to attempt to convince them, as to cause vegetation to grow upon a rock, or to give medicine to a dead man, to raise him to life.

PART THIRD.

PHYSICAL DISEASES.

PART THIRD.

PHYSICAL DISEASES.

CHAPTER I.

NOSOLOGY, OR A SYSTEMATIC ARRANGEMENT AND CLASSIFICATION OF DISEASES.

THERE have been several systems or treatises on Nosology, or the classification of diseases; one, by Dr. Cullen, and which has been, perhaps, the most popular of any, and next to it, that of Sauvages; one also by Hosack, Good, and other writers; but all have been found so prolix, arbitrarily arranged, and exceptionable, that many have rejected them almost with disgust, and pay no regard to any order or arrangement whatever. It does certainly forcibly strike the mind of an observer, that arranging diseases into classes, orders, genera, and species, as we do plants, is unnatural and injudicious, and I view every system of Nosology that I have hitherto seen, very much in the same light. I have not, however, been willing on this account, to discard a systematic arrangement of diseases in every respect, in consequence of the defects of writers upon this subject; but I have given such an arrangement or classification of diseases as does, in my humble opinion, supersede that of all others, by reason of its simplicity, and the easy, natural, and systematic arrangement laid down.

By this Nosology, it will be seen that any person of ordinary capacity who has perused it once, will be able in a moment, to refer any disease to its proper class, order, and species. No part of it is unnatural, arbitrary, or forced; but diseases are classed as they naturally occur, and the mind is left free to rest upon some one *specific disease*, in reference to the organ or part affected.

PHYSICAL DISEASES.

CLASS I.

FEBRILE DISEASES.

Order 1.	Intermittent Fever, Fever and Ague,	<i>Febris Intermittens.</i>
2.	Remittent do. 2 Species,	<i>Febris Remittens.</i>
	1. Simple,	<i>Simplex.</i>
	2. Bilious,	<i>Biliosa.</i>
3.	Inflammatory,	<i>Febris Ardens.</i>
4.	Simple Continued or Long Fever,	<i>Synochus.</i>
5.	Typhus, 4 Species,	<i>Typhus.</i>
	1. Mild,	<i>Mitior.</i>
	2. Putrid or Malignant,	<i>Gravior.</i>
	3. Yellow,	<i>Icterodes.</i>
	4. Spotted,	<i>Petechialis.</i>
6.	Scarlet, 3 Species,	<i>Scarlatina.</i>
	1. Mild,	<i>Mitis.</i>
	2. Affecting the Throat,	<i>Anginosa.</i>
	3. Malignant,	<i>Maligna.</i>
7.	Miliary,	<i>Febris Miliaris.</i>
8.	Puerperal or Child Bed,	<i>Febris Puerperalis.</i>
9.	Hectic,	<i>Febris Hectica.</i>

CLASS II.

INFLAMMATORY DISEASES.

Order 1.	Inflammation of the Brain,	<i>Phrenitis.</i>
2.	Inflammation of the Ear,	<i>Otitis.</i>
3.	Mumps,	<i>Cynanche Parotidea.</i>
4.	Quinsy or Inflammat'y Sore Throat,	<i>Cynanche Tonsillaris</i>
5.	Puqid or Malignant do.	<i>Cynanche Maligna.</i>
6.	Croup, Hives, or Rattles,	<i>Cynanche Trachealis.</i>
7.	Inflammation of the Pharynx,	<i>Cynanche Pharyngea</i>
8.	Do. of the Larynx,	<i>Cynanche Laryngea.</i>
9.	Do. of the Bronchia,	<i>Bronchitis.</i>
10.	Whooping Cough,	<i>Pertussis.</i>
11.	Influenza,	<i>Tussis Epidemicus.</i>
12.	Cold or Cough,	<i>Tussis.</i>
13.	Asthma,	<i>Asthma.</i>
14.	Inflammation of the Lungs,	<i>Pneumonia.</i>
15.	Consumption,	<i>Phthisis Pulmonalis.</i>

16. Pleurisy,	<i>Pleuritis.</i>
17. Inflammation of the Pericardium,	<i>Pericarditis.</i>
18. Do. of the Diaphragm,	<i>Paraphrenesis, sive } Diaphragmatitis. }</i>
19. Do. of the Stomach,	<i>Gastritis.</i>
20. Do. of the Liver,	<i>Hepatitis.</i>
21. Do. of the Spleen,	<i>Splenitis.</i>
22. Do. of the Intestines or Bowels,	<i>Enteritis.</i>
23. Do. of the Kidneys,	<i>Nephritis.</i>
24. Do. of the Uterus or Womb,	<i>Hysteritis.</i>
25. Rheumatism,	<i>Rheumatismus.</i>
26. Gout,	<i>Podagra, or Arthritis.</i>

CLASS III.

ERUPTIVE DISEASES.

Order 1. Small Pox, 2 Species,	<i>Variola.</i>
1. Distinct,	<i>Interpuncta.</i>
2. Confluent,	<i>Confluens.</i>
2. Cow Pox,	<i>Vaccina.</i>
3. Chicken Pox,	<i>Varicella.</i>
4. Measles,	<i>Rubeola.</i>
5. Nettle or Scarlet Rash.	<i>Urticaria.</i>
6. Itch,	<i>Psora.</i>

CLASS IV.

DROPSICAL DISEASES.

Order 1. Dropsy of the Head, 2 Species,	<i>Hydrocephalus.</i>
1. Internal.	<i>Internus.</i>
2. External.	<i>Externus.</i>
2. Dropsy of the Abdomen or Belly,	<i>Ascites</i>
3. Do. of the Chest,	<i>Hydrothorax.</i>
4. Do. of the Ovaria,	<i>Ascites Ovarii.</i>
5. Do. of the Cellular Membrane,	<i>Anasarca.</i>
6. Do. of the Scrotum,	<i>Hydrocele.</i>

CLASS V.

CEREBRAL DISEASES.

Order 1. Insanity or Mental Derangement,	<i>Mania.</i>
2 Species,	
1. Idiopathic,	<i>Idiopathica.</i>
2. Symptomatic,	<i>Symptomatica.</i>
2. Nymphomania, or Furor Uterinus.	

Order 3. Melancholy,	<i>Melancholia.</i>
4. Epilepsy or Falling Sickness,	<i>Epilepsia.</i>
5. Apoplexy, 2 Species,	<i>Apoplexia.</i>
1. Sanguineous.	<i>Sanguinea.</i>
2. Serous.	<i>Serosa.</i>
6. Catalepsy,	<i>Catalepsia.</i>
7. Lethargy,	<i>Coma.</i>
8. Fainting or Swooning,	<i>Syncope.</i>
9. Giddiness,	<i>Vertigo.</i>

CLASS VI.

NERVOUS DISEASES.

Order 1. Hysterics,	<i>Hysteria.</i>
2. Hypochondria,	<i>Hypocondriasis.</i>
3. Palsy,	<i>Paralysis.</i>
4. St. Vitus' Dance,	<i>Chorea Sancti Viti.</i>

CLASS VII.

GASTRIC DISEASES.

Order 1. Cholera Morbus, 2 Species,	<i>Cholera Morbus.</i>
1. Bilious,	<i>Biliosa.</i>
2. Spasmodic, or	} <i>Spasmodica sive</i>
Malignant,	
2. Water Brash,	<i>Pyrosis.</i>
3. Indigestion,	<i>Dyspepsia.</i>
4. Convulsions,	<i>Spasmi.</i>
5. Cramp,	<i>Tetanus.</i>
6. Heartburn,	<i>Cardialgia.</i>
7. Canker,	<i>Apthae.</i>
8. Vomiting,	<i>Emesis.</i>
9. Hiccup,	<i>Singultus.</i>

CLASS VIII.

INTESTINAL OR BOWEL DISEASES.

Order 1. Dysentery, 2 Species,	<i>Dysenteria.</i>
1. Acute,	<i>Acuta.</i>
2. Chronic,	<i>Chronica.</i>
2. Bowel, Summer Complaint, or Relax,	<i>Diarrhæa.</i>

Order 3. Colic, 4 Species,	<i>Colica.</i>
1. Flatulent,	<i>Flatulenta.</i>
2. Bilious,	<i>Biliosa.</i>
3. Painter's,	<i>Pictorum.</i>
4. Hysteric,	<i>Hysterica.</i>
4. Costiveness or Constipation,	<i>Constipatio.</i>

CLASS IX.

PROFLUENT DISEASES.

Order 1. Vomiting of Blood,	<i>Hæmatæmesis.</i>
2. Spitting of Blood,	<i>Hæmoptysis.</i>
3. Bleeding from the Nose,	<i>Epistaxis.</i>
4. Involuntary Discharge of Urine,	<i>Diabetes.</i>
5. Whites or Fluor Albus,	<i>Leucorrhœa.</i>
6. Immoderate Flow of Blood from the Womb,	} <i>Menorrhagia.</i>
7. Abortion,	
8. Cessation of the Menses.	
9. Incontinence of Urine,	<i>Enuresis.</i>
10. Bloody Urine,	<i>Hæmaturia.</i>
11. Onanism, or Artificial Discharge of Semen,	}

CLASS X.

REFLUENT DISEASES.

Order 1. Menses, Retention of	<i>Chlorosis.</i>
2. Do. Suppression of	<i>Amenorrhœa.</i>
3. Do. Painful Affections of	<i>Dysmenorrhœa.</i>
4. Do. Angina Pectoris.	
5. Night Mare,	<i>Incubus.</i>
6. Palpitation of the Heart,	<i>Palpitatio.</i>
7. Urine, Suppression of	<i>Ischuria.</i>
8. Jaundice,	<i>Icterus.</i>

CLASS XI.

CONSTITUTIONAL DISEASES.

Order 1. Scurvy,	<i>Scorbutus.</i>
2. Urine, Heat of	<i>Ardor Urinæ.</i>

Order 3. Emaciation,	<i>Marasmus.</i>
4. General Debility.	
5. Mercurial Disease and Salivation.	
6. Yaws,	<i>Frambæsia.</i>
7. Rickets,	<i>Rachitis.</i>

CLASS XII.

LOCAL DISEASES.

Order 1. Lumbago.	
2. Worms, 4 Species,	<i>Vermes.</i>
1. Pin,	<i>Ascarides.</i>
2. Long Round,	<i>Lumbricoides.</i>
3. Hair,	<i>Trichuris,</i>
4. Tape,	<i>Tænia.</i>
3. Teething, or Dentition,	<i>Dentitio.</i>
4. Poisons,	
5. Head-ache, 2 Species,	<i>Cephalalgia.</i>
1. Idiopathic,	<i>Idiopathica.</i>
2. Symptomatic.	<i>Symptomatica.</i>

CHAPTER II.

PRELIMINARY REMARKS.

SECTION I.

DEFINITION OF HEALTH AND DISEASE.

Health.

When all the functions of the system are duly performed, a person may be said to be in *health*.

Disease.

Any alteration from this state, or when any part ceases to perform its office, or function, disease is the consequence.

Disease a Unit.

Is it irrational, or unphilosophical, to consider disease a unit? All its innumerable forms, or symptoms, being derived from one cause acting upon different organs or tissues of the body.

Disease, Primary or Symptomatic.

Disease is either primary (*idiopathic*), or symptomatic. Primary when it does not depend upon *any other*. Symptomatic, when it does depend on some other complaint; for instance, when the head aches by reason of a disordered state of the stomach.

Disease is Acute or Chronic.

Acute when the attack is very severe, attended with violent symptoms, terminates in a few days and is dangerous.—*Chronic*, when it is slow in its progress, little or no inflammation, and is not attended with immediate danger.

Peculiarity of Constitution, (Idiosyncrasy.)

A peculiarity of constitution, in which a person is affected by certain agents, which, if applied to a hundred other persons, would produce no effect: thus some people cannot see a finger bleed without fainting; and thus violent inflammation is induced on the skin of some persons, by substances that are perfectly innocent to others.

State of the Mind.

Fear, anxiety, and a fretful temper, occasion and aggravate diseases. In vain do we apply medicines to the body for diseases which proceed from the mind. When that is affected, the best medicine is to soothe

the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible.

Age.

Here it must be observed, that the doses of medicine mentioned in this work, (with some exceptions pointed out in their place,) are those adapted for an adult; but as in the two extremes of life, childhood and old-age, the body is weaker, and in early youth more susceptible of all the impressions, these quantities cannot be administered with safety in every case; and hence the judgment of the prescriber must be exercised.

Sex.

Although some women possess as much bodily strength and vigour of constitution as the majority of men; yet the greater delicacy and sensibility of the female frame, at every period of life, requires not only caution in apportioning the doses of active medicine, which should be less than those ordered for men of the same age; but the medicines themselves should be such, as are likely to fulfil the indications without much violence. The state of the uterine system likewise must not be overlooked in prescribing for a female. Thus the employment of aloetic and drastic purgatives, bark and astringents should be suspended during the period of pregnancy.

Temperaments.

It is undoubtedly true that persons of different temperaments or original confirmations of body are differently affected by the operations of medicines. Stimulants more readily affect those of a sanguine than those of a phlegmatic temperament, and therefore smaller doses are required. In the phlegmatic, also, the bowels are generally torpid, and require both a description of purgatives and such doses as would endanger an irritable and delicate constitution.

Habit.

Habits have considerable influence in modifying the operation of medicines. Persons addicted to the use of spirits, narcotics, and other stimulants, are less easily excited, both by medicinal stimulants and narcotics. Persons in the daily habit of taking purgatives, must take a different article to produce much effect upon the bowels. In the employment of medicines, which require to be long-continued, the beneficial effect is soon lost, if the doses be not increased.

Of the Form and Composition of Prescriptions.

In every prescription simplicity should be kept in view, and when medicine will answer the intention of the prescriber, it ought to be preferred. The nauseous taste, however, and other qualities of some medicines, require the addition of others to modify their taste or action; but, although medicines are more generally prescribed in a compound form, yet the practice of accumulating a great variety of ingredients in one prescription should be avoided.

Medicines exhibited in a fluid form operate sooner, and with more certainty than in the solid state; but in choosing the vehicle or solvent, the taste of the patient ought not to be overlooked. Syrups do this tolerably well. Medicines which when given alone produce griping, require the addition of aromatics to correct that quality, and when they operate with violence, mucilages or opiates are necessary to moderate their action. In prescribing purgatives it is also necessary to consider the particular part of the alimentary canal, on which they immediately act. Thus, rhubarb acts chiefly on the upper part of the bowels, aloes on the lower, and jalap and senna on the whole intestines.

Another reason for ordering medicines in a compound form, is the necessity of producing two or more effects at one time. Thus the same dose may be required in a case of colic, for example, to allay pain and to open the bowels, or in fever to determine to the skin, to allay irritation and to produce sleep. But in combining medicines, care must be taken not to bring together incompatibles, or substances that decompose each other, or chemically combine, and consequently alter the nature of the mixture, or render it inert, unless the resulting compound be the remedy on which the prescriber relies. Thus acids and alkalis are incompatible, unless the neutral salt be the remedy required.

Doses.

It should be remembered that when we speak of a tea-spoonful being a dose, one of an ordinary size is meant, which is a fluid drachm.

When a table-spoonful is mentioned, one also of an ordinary size is meant, and which is half an ounce.

Pills.

When the weight of pills is not mentioned, those of an ordinary size are meant; they contain usually three grains.

I prefer this method, because it is much more convenient than to weigh medicine every time it is necessary to administer it, and it is sufficiently accurate for all ordinary medicines. When greater accuracy is required, the weight and measure will be mentioned.

Prescriptions.

Every prescription or direction for the administration of medicine, except the prescriber gives it himself, should be in writing, and that very plain and explicit. The quantity to be given, and the time when it should be given, ought to be particularly mentioned, and these directions ought to be left with the nurse only. Many valuable lives have been lost for the want of these precautions.

CLASS I.

CHAPTER I.

FEBRILE DISEASES.

Character.

This class of diseases is characterised by an increase of heat, an accelerated pulse, a foul tongue, and an impaired state of several functions of the body.

SECTION I.

FEVERS IN GENERAL.

"IN tracing the progress of fever in its direful and disastrous course," says Robertson, "we are compelled to regard a remedy, at once safe and powerful to still its raging, as one of the most signal benefits which the Deity has conferred on man. When we cast our eye over the map of human misery, and mark the monuments of the destroyer—the scenes of battle and devastation, spread out over all the nations of the world, where he has marched with *death* and *fever* inscribed on his bloody banners; and behold the same defence to resist his power, and to baffle his malignity; we may exclaim with the poet:

"For *thou*, ten thousand, thousand years,
Hast seen the gush of human tears,
Which shall no longer flow."

The tears that have bedewed the earth, were we to calculate their sum, poured out for the dead that have fallen by this one disease called *fever*, they would form an ocean that might swim the *living*! Were the cold and ghastly forms of the victims that have sunk into the silence of everlasting sleep, by this one disease, since the history of the son of the Shunamite to the present time, collected into one monument, they would form a *mountain* that would astonish heaven, and terrify the earth! What heart has not bled over a beloved friend? over children dearer than their own soul? over the wife or husband of their youth? And how many have seen all their earthly comforts wither under the sweeping siroc of this pervading and desolating storm? Yes! from the first thrill of the agitated nerve, the stinging pain, the hot and heaving breast, to "the pestilence that walketh in darkness, and the destruction that wasteth openly at noon day;" the human race, smitten in all its members, consumed in every limb, has sunk to the house of silence, in multitudes in-

numerable, under the single pressure of this destructive power. Look at the *east* and *west*, the silent cities, the untrodden streets, the dismal, dark array of travellers on the path of death—and ask, who hath done all this? what enemy hath been here? Echo, from her thousand caves, would ring out her response, *fever! fever! fever!* This is the disease which, to break, to baffle, to conquer, or subdue, the learned Colleges of Physicians have tried all their efforts, and spent their skill in vain. It must run its course, is the common sentiment; if one mode of treatment fails, we must try *another*, and *another*, and *another*, till the exhausted imagination, the worn out sources of the *materia medica*, and the dying patient, arrest the hand of the experimenter, (and, I might have said, tormentor,) or nature triumphs equally over medicine and disease.

“The practice of medicine is, perhaps, the only instance in which a man can profit by his blunders and mistakes. The very medicines which aggravate and protract the malady, bind a laurel on the Professor’s brow; when, at last, the sick is saved by the living powers of nature struggling against death and the physician. He receives all the credit of a miraculous cure; he is lauded to the skies, for delivering the sick from a detail of the most deadly symptoms of misery, into which he himself had plunged them; and out of which they never would have arisen, but by the recubering efforts of that living power, which, at once, triumphed over *poison*, and disease, and death.”

The causes which have conspired to cover with uncertainty the treatment of fever, and to arm the members of the faculty often against each other, are numerous and important. A brief detail would unfold the many causes of error, and the fatal consequences which often result from the established practice.

Doctor Eberle, who has lately written a treatise on the Theory and Practice of Medicine, thus remarks: “When indeed it is considered that the destroying angel has made his most desolating visitations under the form of febrile epidemics; and that in the long list of human maladies *fever* occurs in perhaps nine cases out of ten, the paramount importance of this subject is strongly forced upon our convictions.”

“If we except,” says Van Swieten, “those who perish by a violent death, and such as are extinguished by mere old age, and which are indeed few, almost all the rest die either of fever, or of diseases accompanied with fever. We read in Pliny with what fear and trembling the Romans endeavoured to have this universal disease—*fever*, appeased by their supplications in the temple of *Fanum*. And hence perhaps it is that fevers are called *diseases* by Hesiod, and that Horace calls all diseases simply fevers when they rushed out of the box of Pandora.”

Dr. Donaldson who published a new Theory and Practice of Fevers, remarks as follows:

“From a retrospective glance at the history of our science, we are forced to acknowledge that there is perhaps no subject which is more eminently calculated to humble the pride of human reason than this one. For, in relation to this subject especially, pathology has been in a continued state of revolution and instability. The human mind has been engaged with this subject for near three thousand years. Theories have risen and sunk again in a continued and rapid series of succession; each

has had its hour "to strut upon the stage," and its votaries to yield it faith; but the stream of time has hitherto overturned all these unsubstantial, though often highly wrought fabrics."

Dr. Cole, of Worcester, suggested the idea, that the proximate cause or nature of fever, depends on a laxity or debility of the brain and origin of the nerves. Bozelli and Cole were the only persons, who prior to the celebrated Hoffman, considered the nervous system to be the seat of the proximate cause of fever. These doctrines of the preternatural acrimony of the nervous fluid of Bozelli, of Italy, of nervous laxity or debility of Cole, and spasm and atony of Hoffman, were imbibed by the celebrated Dr. Cullen, of Scotland, and have been implicitly believed by almost all physicians of modern Europe with very little alterations, in the manner of explaining them.

Dr. W. Cullen, of Edinburgh, adopted the doctrine of spasm and atony of the extreme arteries, and laboured hard to explain the proximate cause or nature of fever as consisting of this universal spasm, produced by the remote causes of the disease, or rather the *vis medicatrix naturæ*; which suppositions of the nature of fever, says Dr. Jackson, are mere subterfuges, and mysterious ways of acknowledging the grossest ignorance of the subject, and adds, that the proximate cause of fever is a certain peculiar state of the body, on which the disease, or the subsequent parts of the disease, necessarily depend. It is, in short, the first essential action of the febrile cause; but this action is so intricate, and difficult to be discovered, that physicians have sought for it in vain, for more than two thousand years. The ancients were satisfied with the ideas of preternatural heat, excited in the heart, and communicated to the rest of the body by means of the blood, animal spirits, or nervous influence; and the moderns have adopted the no less erroneous doctrine of a spasmodic affection of the moving fibres, and weakened action of the nervous system.

Dr. Benjamin Rush, of Philadelphia, implicitly imbibed the doctrines of Brown and Darwin, in opposition to those of Cullen. He boldly asserts, that the essence of fever consists in an irregular action, or an absence of the natural order of motion, produced or invited by predisposing debility; that every fever consists of increased excitement, and is seated in the blood vessels; and that all the local affections, called pleurisy, angina, phrenzy, inflammation of the liver, dropsy of the head, consumption of the lungs, inflammations of the liver, stomach, intestines, kidneys, and all other external and internal parts, are the mere symptoms only of an original and primary disease of the sanguiferous system, excepting in some local affections of the viscera produced by injuries, which bring the whole sanguiferous system into sympathy. The irregular action of the arteries, constituting fever, consisted, according to his theory in a spasm, convulsion, heat, itching, and in suffocated excitement, which five constituents of preternatural action of the blood vessels, are imaginary creatures or beings of a visionary brain, drawn from the celebrated and hypothetical systems of Cullen, Brown, and Darwin. He further adds, that there is only one exciting cause, and that is *excitement*; so he makes all fevers to consist of an excess of excitement, which raises the powers of circulation to

a degree incompatible with the enjoyment of health, inducing morbid actions, motions, sensations and operations, in the animal economy.

Thus we might trace the opinions of physicians in the different periods of time, and in different nations, respecting the real nature of fever, we might show the relative ignorance of all men on this great subject, and fully evince their defects in the knowledge of the nature and cure of diseases, in all preceding ages, by the testimonies of their own writings; whereby the whole science has been overwhelmed with floods of errors and erroneous systems from the time of Hippocrates down to the present age of learning and erudition; we might easily show, that the whole art of medicine has been distracted by disputations and revolutions of its theories, and that it continues still to fluctuate on the ocean of visions and uncertainties, and theoretical hypotheses, of its cultivators, who have either wished to exalt their names by the introduction of new systems and doctrines, or have laboured hard to acquire riches by some egregious impositions on mankind; and that very few have desired to advance the science and art of medicine, in order to confer the most gratuitous and lasting benefits on their fellow creatures. But time would fail us to speak of the various systems of medicine, and review their numerous treatises, and I shall, therefore, open to view the doctrines of the schools of medicine of the present times, and shall then proceed to explain the doctrine of the nature of fever, which I have discovered.

"I was educated," says Dr. Donaldson, "in the Gregorian doctrines of the Edinburgh school of medicine; I was taught the theory of medicine as delivered in his *Conspectus*, and was exercised in the Cullenian discipline, divested of all his hypothetical errors of spasm and atony of the extremities of arteries. I learned all the branches of the medical science under the distinguished and erudite professors of the most celebrated university and school of medicine in the world. I always embraced plausible truths, and rejected visible errors, in theory and practice; I admitted doubtful hypotheses to have no place in my mind, to influence my future practice. Even during my discipleship, I thought for myself, and digested their instructions with an unfettered and independent judgment and reasoning, and I had no sooner completed my studies of the theoretical and practical science of medicine, and other branches of learning, in the college of Edinburgh, than I repaired to the schools of London, so famous for anatomy and physiology.

"Having finished my intended course in the metropolis of the British empire, I launched into practice, under the auspices of a real imitator of the Edinburgh school, and a follower of Clarke, Blane, Lind, Thomas, &c. and soon had ample opportunities of witnessing the great insufficiencies of the medical practice of the present day, in the hands of the most skilful administrators and practitioners. In this situation I soon had occasions to dissent from the doctrines of the schools, but years elapsed before I could bring myself to deviate from the practice which they, and the most esteemed authors, taught in their instructions and works. I hesitated in the old road until I should discover a new way by experience and observation, to keep me from stumbling on the dark mountains of doubts and errors. I consulted all the most celebra-

ted writings of ancient and modern physicians; I searched for light in vain, to direct my steps.

“During my travels in the East-Indies, in the years 1810, '11, '14, '15, and '16, I had many opportunities of trying every method of curing diseases of all descriptions, and of proving the virtues and efficacies of all remedies commonly employed by practitioners, as well as of making all necessary alterations in former modes of treatment, and in the choice of remedies. Fevers, fluxes, inflammations, affections of the spleen and liver, apoplexies, palsies, spasms, &c. were the great diseases that first attracted my attention, being under my own care and treatment in those warm regions, and I was extremely mortified to find all my remedies ineffectual to reduce inflammation, or subdue many of those diseases, by the common method of treatment; and my pride was humbled at the repeated disappointments I encountered, in being baffled to cure them with the common remedies, carried to the same extent, and administered with the same diligence, as recommended in books, or by professors of medicine; I administered purges, barks, and wine, with the utmost rigour, in all cases of inter and remittent fevers; I exhibited saline purges, opiates, mercurials, sudorifics, and nutrients, in cases of dysentery, and found them all ineffectual to arrest the progress of fevers, or to cure the affections of dysentery, in many severe cases. I could not produce an immediate crisis in fevers, nor remove the agonies of fluxes; they still continued to return, or to torture my patients, in defiance of all the remedies that have been recommended by Drs. Blane, Lind, Clarke, Chisholm, Cullen, Thomas, Philip, Hoffman, Boerhaave, Brown, Ferriar, Fordyce, Currie, Darwin, Jackson, Wright, Fowler, Trotter, Haygarth, Heberden, Lieutaud, Huxham, Russell, Macgregor, Falconer, Desgenettes, Milne, Dewar, Bisset, Warren, Pringle, Buchan, Churchhill, Friend, Mead, &c. who are supposed to have delivered the sentiments of the medical schools in their days. Neither were the remedies employed by the most noted of the ancients, as Hippocrates, Celsus, Galenus, Asclepiades, Themiston, Erasistratus, Diocles, Praxagoras, Aristoteles, Herophilus, Heraclites, Apollonius, Sextius Niger, Julius Bassus, Oribasius, Alexander, Ætius, Paulus, Palladius, Actuarius, Rhasis, Avicenna, Avenzoar, Averhoes, Alsaharavius, Constantinus, Hermes, Al Tamini, Abul Pharagius, Ali Ebno, L'Abbas, Al Malice, Hoamti, &c. among Egyptians, Grecians, Asiatics, Chinese, Africans, &c. (see our history of medicine,) more successful in curing febrile distempers. Having read and studied the medicine of the ancients and moderns, I was able to choose those remedies, proposed in their writings, best calculated to cure disorders of the human frame, in all climates of the earth, and employ them to the greatest advantage; but without the knowledge of the real nature of fevers and fluxes, I still laboured in the dark, and could not effect, in all cases, by the use of such remedies, a solution of the disease under my care, with any degree of certainty of success in the commencement; I was unacquainted with the principle on which those remedies acted to bring them to a favourable crisis; I longed for that day when my knowledge of the nature of the diseases, and of the virtues of the remedies employed to

cure them, would enable me to cure the severest of them at pleasure, and to liberate my fellow-creatures from the iron grasp of mortal affections, and I began to lament the universal ignorance of the professors of medicine, respecting the nature of diseases.

"From that day till the present, I never have used the remedies commonly prescribed by writers on medicine, neither have I followed the doctrines of the schools in the treatment of febrile diseases; I determined that no other patient of mine should ever become a victim to the common old treatment pointed out by professors of medicine, and authors of medical books. In the full belief of the doctrine which experience had taught me, I soon had the pleasure of seeing almost all my patients recover from fevers, in the space of two, three, four, or five days, whereas, according to the old method of treatment followed by my contemporaries, patients laboured a month, six weeks, two or three months, under a violent fever and its fatal dregs, and either died or were restored by the mere efforts of nature, or languished under the irremediable consequences of such disease, during the remainder of their lives, in misery and infirmity.

"Thus it may be perceived, by the foregoing collection of facts, how I came to possess a new doctrine and theory of fevers, and to institute a new method of treatment on the foundation of a sure and certain principle of practice, deduced from this doctrine, in the use and application of remedies, more rational and successful than appears in any system of medicine ever exhibited in ancient or modern times, as far as I know, by the annals of medicine; and I now come forward to open the discovery for the general benefit of mankind. In doing this I shall be under the absolute necessity of exposing and rejecting all former opinions respecting the proximate causes or nature of diseases; I shall have to combat the errors of the learned and ignorant, both in the theory and practice of medicine, I shall be forced to reject all the erroneous doctrines of the schools in which I was educated; I shall have to defend my sentiments against all the invidious malignities and contumelies of mine enemies, on the basis of infallible principles deduced from, and depending on the truths and facts which I have discovered in the nature of these diseases, by experience, observation, reflecting and reasoning, so absolutely necessary to be known before we can succeed in practice. Many self-confident and ignorant pretenders to the science and art of medicine, are inclined to suppose that no errors exist, in the present theories of the enlightened schools of Europe and America, to combat, in the treatment of diseases.

"In fact, no physician whose works I have read, no professor of medicine whom I have heard speak on the nature of diseases, has ever discovered, or even hinted at the nature and cure of fevers; all have delivered theories, which amount to open acknowledgments of their ignorance of it; or have candidly professed the universal ignorance of all physicians in the world, of the former and present times, respecting the nature of these diseases.

"I observed the plan of cure followed by the East-Indians in fevers. I saw the practitioners cure the most vehement cases of intermittent fevers in the space of a single day, with such a mathematical precision

and certainty, as I never beheld in any region of the earth; by *purging, vomiting, and sweating, &c.** I perceived that they also cured without knowing the nature of disease, or the principles of their practice; and was led to believe all diseases curable, if we could only discover the remedies against them, and would apply these remedies in due time and to sufficient extent, to effect these possible ends. Their method of treatment consisted in the administration of a medicine that effectually purged and vomited their patients, who were obliged at the same time to use the steam bath, and to drink abundantly of warm teas until copious or profuse sweat was produced, and the fever was mechanically reduced, leaving nothing to be done by feeble nature, as the ancient and modern practitioners of Europe were accustomed to do many ages prior to the days of Bottallus and Sydenham.

“Having acquired a knowledge of these things relative to the nature of febrile diseases, I was induced to abandon the common plan of treatment, and to institute a new method of curing them with the use of new remedies; but in the course of my investigations, I learned from the annals of medical history, that there could be no advantage in deserting the old path, until I had found a new one, well paved with the solid rocks of experience, observation, and induction, in which I would meet no impediments to my course of rational practice. On the consideration of this circumstance, I rather concluded to conform my practice, in some degree and measure, to the doctrine of the schools, until I should sufficiently attest and establish my new doctrines and principles, by long and reiterated experience and observations, which I deemed necessary to sanction any change in the generally approved practice, and to ratify the truths of my doctrines and maxims by the success of the remedies which I proposed to myself to employ in their cure.”

DESCRIPTION, OR DEFINITION OF FEVER.

Fever is an increased action of the heart and arteries, to expel from the system irritating or morbid matter. It is salutary in its nature, being the means used to throw off something that offends or oppresses her. It is often fatal, but this is rather to be attributed to the fault of the constitution, than the disease itself, or rather to the want of proper remedies.

When a person is suddenly attacked by shiverings or rigours, followed by a hot skin, a quick pulse, and a feeling of languor and lassitude, he is said to have an attack of fever. With such symptoms are usual-

* The East-Indians practice medicine with success; their skill is exemplified in their manner of treating the diseases here mentioned; instead of rendering the patient worse by the lancet, mercury, &c. they cure a fever in the space of two days with a “mathematical precision, by vomiting, sweating, and purging, the most rational, and powerful method that could be adopted.” They reject bleeding as the most absurd treatment imaginable; and make use of vegetable productions. A gentleman well conversant with the Chinese, stated not long since, that in travelling through the largest cities in India, not a single individual could be seen with the loss of a limb; their treatment prevents the necessity of amputation.

ly present also a loss of appetite, thirst, restlessness, and diminished secretion. These constitute the leading symptoms of fever, the characteristic features by which its presence may always be detected. Every function of the body indeed is more or less disturbed.

CAUSES.

As much controversy and speculation as there is respecting the pathology or nature of fever, we think there is no complaint that is more simple or easily understood, as regards causes, symptoms, and treatment.

It would be too tedious further to enumerate the various theories that have been maintained, respecting the origin and nature of this class of diseases. We shall therefore omit this, and enter into a practical disquisition of the subject.

I shall now speak of the remote, intermediate, and proximate cause of fever.

We may consider fever a unit; that the various phenomena of the complaint, depend not upon any specific difference in the many types of fever, but consist, rather, in the various exciting causes, habit, temperament, &c.

Remote Causes.

In general, every cause capable of producing a departure from a healthy standard, predisposes the system to fever.

1st. High atmospheric temperature may be mentioned as a cause.

2d. *Cold*.—As a cause of fever, cold plays a very important part. It diminishes the action of the capillary vessels, giving a pale, shrunken and dry state of the skin. It also diminishes the sensibility of the system.

The most prolific and fruitful source of disease is *cold, united with moisture*. When the atmosphere is cold and dry, it seldom causes any complaint; but in damp, wet, and very cold weather, the system becomes more susceptible of morbid impressions. Much, however, depends upon the state of the body when exposed to cold. If it be very gradually applied, it can be borne with impunity. But if it be applied suddenly, and especially when there is great perspiration, fever or inflammation succeeds.

All sudden transitions from heat to cold, or cold to heat, are sources of fever. The capillary system ceases to perform its office, or performs it imperfectly, the consequence of which is, that vitiated blood recedes from the surface, and is accumulated in too great a quantity upon the heart, and large arteries, which causes in them an unnatural or preternatural effort to return it to its original channels, or into the vessels of the skin, to relax or overcome its constriction, and thereby expel the irritating, morbid, or perspirable matter.

3d, *Heat*.—Heat may also be reckoned as a remote or predisposing cause to fever. Dr. James Johnson, in speaking of the effect of heat upon

the system, thus remarks: "Solar heat produces only the predisposition, while terrestrial exhalations and cold, call into action the principal diseases of hot climates.

The mode in which solar heat contributes to the production of disease, appears to be either by augmenting the general irritability of the system, or more generally, by exciting inordinate functional action of the skin and the liver, and thereby rendering them more susceptible of the paralyzing impression of cold.

Between the skin and the liver there exists a close and powerful sympathy, in consequence of which, whatever excites the functions of the former, produces perhaps an equal increase of the functions of the latter organ.

Heat also operates as a cause of fever, by extricating or evolving certain deleterious gases or agents.

INFECTION.

Deleterious Effluvia.

By this term we understand a class of febrile agents floating in the air, and which is taken into the circulation through the medium of the lungs. It may be divided into three kinds:

1. Effluvia arising from the decomposition of vegetable agents.
2. An effluvia produced by a person in a state of disease.
3. Effluvia from putrid animal substances.

1. *Marsh or Vegetable Effluvia.*

The effluvia arising from the decomposition of vegetable matter, aided by a suitable degree of heat, and perhaps moisture, mixes with the atmosphere and contaminates it. This is taken into the system, and if not thrown off by some of the excretory ducts, proves an exciting cause of fever. "This morbid agent," says a writer, "was not unknown to the ancient Greek physicians. They personified this æriform poison under the emblem of a many-headed monster, whose pestiferous influence was so severely exercised over the luxuriant fields of Argolis, that it was made one of the labours of the potent son of Alcmenus to rid the country of this dreaded source of pestilence. Hercules, accordingly drained the extensive Lernean marshes, and thus dried up this abundant source of pestiferous emanations."

It is a fact worthy of remark, that persons residing in very elevated situations, are less liable to become affected from the influence of marsh effluvia, than those who reside in low situations in the neighborhood of marshes. This has been repeatedly demonstrated. But how far this noxious air may be diffused sufficient to produce fever, is doubtful. Bancroft thinks it rarely extends beyond a quarter of a mile, and mentions several facts to prove this assertion. The effluvia arising from marshes, seems to be emitted much more at night than in the day time; hence there is much greater danger of contracting fevers during

that period. Delisle says, that the most dangerous period in the twenty-four hours of the day, is, that which accompanies the setting, and that which immediately precedes the rising of the sun; and the least critical time, is, when the sun is at the highest point above the horizon.

It prevails extensively on fresh water rivers and streams, but it seems to be very much counteracted by salt water.

Marsh effluvia produces fever quite different in its general character from that produced by animal or other poisonous effluvia. It generates various grades of bilious fevers, intermittent and remittent. It also produces a bilious state of the system, enlargement of the liver, spleen, jaundice, &c. An author remarks that "the indigenous inhabitants of marshy districts, in warm climates, present an aspect of suffering and wretchedness from this cause, which is well calculated to draw forth the commiseration of those who are more fortunately located. Continually exposed to the deleterious influence of these baneful exhalations, man, in such situations, exhibits a state of feebleness and early decrepitude strongly indicative of a broken down constitution, and deep and irremediable chronic disease." Custom or habit renders the influence of this effluvia less injurious to the system, and less susceptible of its impression. Hence persons from a northern climate on their arrival to a southern one, much more readily experience the effects of it, than the natives. To such it is more serious and fatal. There are also varieties of this effluvia depending on various causes. Doctor Johnson expresses the same sentiment. He states that the fever of Batavia differs from the fever of Walcheren. The fever of Antigua from the fever of the Ganges, and all these differ materially from the plague of the Levant.

The influence of this poisonous gas on the human system, depends on the state of the body, on temperament, predisposition, and many other things. Thus, of a number of persons exposed to this effluvia, some may have the intermittent, others the remittent, and some the malignant bilious fever. The most simple form arising from it, is the intermittent. As it increases, it produces a higher and more violent grade of fever. It may extend from the simple fever and ague, to the malignant and fatal plague. Of the time which intervenes between the reception of the effluvia and the first appearance of it on the body, is various and uncertain. Of an equal number of persons exposed at the same time, one may have it immediately as it were, another in a few days, and another in several weeks, while some will remain free from it altogether. Notwithstanding these great diversities, the essential nature of this effluvia is every where the same.

It is an established fact, that marsh and other effluvia, passing over bays or rivers of water, are absorbed and annihilated.

Daily experience still confirms, that it is in the neighbourhood of marshes, and all such places where vegetable and animal putrefaction takes place to any extent, that pestilential and other diseases of various grades and violence prevail. Epidemics, attended with carbuncles and buboes, which are denominated, in conjunction with ordinary symptoms of what is called jail and hospital fever, the characteristics of the plague, down to the mildest intermittents, have appeared, and raged with ex-

traordinary violence, occasioned by the exhalations from putrifying animal and vegetable substances.

The numerous testimonies of the most judicious writers, shew, that there are few climates where instances have not occurred of malignant epidemic and endemic diseases from these sources. Bengal, on both sides of the Ganges, and Egypt, annually overflowed by the Nile, experience an unhealthy and pestilential atmosphere, immediately after the exhalations from the putrifying collections of vegetable and animal matter begin to arise, which diffusing themselves in the air, bring on diseases of various grades of malignancy, according to the greater or less contaminated state of the atmosphere, and other concomitant circumstances. Of Grand Cairo, Dr. Mead observes—"It is situated in a sandy plain, at the foot of a mountain, which, by keeping off the winds that would refresh the air, makes the heat very stifling. Through the midst of it passes a canal, which is filled with water during the overflowing of the Nile, and after the river is decreased, it gradually dries up. Into this canal the people throw all kinds of filth, carrion, &c. so that the stench arising from it, and the mud together, is insufferable. In this situation of things, the plague every year constantly preys upon the inhabitants, and is only stopped when the Nile, by overflowing, washes away the load of filth." Of Bengal thus—"During the rain, this rich and fertile country is covered by the Ganges, and converted as it were into a large pool of water. In the month of October, when the stagnated water begins to be exhaled by the heat of the sun, the air is then greatly polluted by the vapours from the slime and mud left by the Ganges, and by the corruption of dead fish and other animals. Diseases then rage—fevers of the remitting and intermitting kind. If the season be very sickly, some are seized with a malignant fever, of which they soon die. The body is covered with blotches of a livid colour, and the corpse, in a few hours, turns quite livid and corrupted. At this time fluxes prevail." He further observes, that the island of Bombay has been rendered much more healthy than it formerly was, by a wall, built to prevent the encroachments of the sea, where it formed a salt marsh; and by an order, that none of the natives should manure their cocoa-trees with putrid fish. He also observes of Bencoolen, in the island of Sumatra, that it is the most unhealthy of all the East India settlements; but that by building their fort on a dry, elevated place, about three miles from the town, it became sufficiently healthy. Batavia, the capital of the Dutch East India dominions, (Dr. Lynd) is annually subject to a fatal and consuming sickness: "It has been remarked, that the sickness rages with the greatest violence when the rains have abated, and the sun has evaporated the water in the ditches, so that the mud begins to appear. The stench from the mud is intolerable." Mr. Ives, in his journal of a journey from India to Europe by land, observes, that Gambroon, in Persia, is very unhealthful, and that various authors, as well as the present English factory, "impute its unhealthiness, during the summer months, to the noxious effluvia with which the air is contaminated from the great quantities of blubber-fish left by the sea upon the shore, and which very soon become highly offensive." The same writer observes of Bassorah, that fifteen years

before his visit to this place, the banks of the river Euphrates having been demolished by the Arabs, to revenge an injury done them by the Turks, its environs were inundated. "The stagnating water in the adjacent country, and the great quantity of dead and corrupted fish at that time lying upon the shore, polluted the whole atmosphere, and produced a putrid and most mortal fever, of which between twelve and fourteen thousand of the inhabitants perished; and at the same time, not above two or three of the Europeans who were settled there escaped." It is further observed of this place, (Tytler's Treatise) by a gentleman residing there in 1780, "that the canal that runs through a great part of the city being filled with the bodies of animals, and all kinds of putrid matters; and, at low tides, all these substances exposed to the sun, made the air in the town scarce supportable; and, being totally destitute of police, the streets were in many places covered with human ordure, the bodies of dead dogs and cats, &c. which emitted a stench more disagreeable and putrid than any thing he ever experienced." "In all spots, (Dr. Lynd) in the East Indies, situated near large swamps, or the muddy banks of rivers, or the foul shores of the seas, the vapours exhaling from putrid stagnated water, produces mortal diseases." He more particularly mentions, that the yellow fever often rages at Greenwich Hospital, in Jamaica, which, he observes, was built near a marsh, and could not proceed from any source of infection in the hospital. He every where attributes the yellow fever to the vapours arising from putrifying vegetable and animal substances. Dr. Clark, in his "Observations on the diseases of long voyages to hot countries," mentions a contagious malignant fever, which prevailed at Prince Island, in 1771, produced from the exhalations of putrifying vegetable substances.

The plague, which caused so great terror and mortality in London, 1625 and 1636, according to the account given of it by Mr. Woodal, surgeon to St. Bartholomew's hospital, and surveyor-general to the East India company, who was present the two years it prevailed there, was evidently generated in that city, from causes similar to those already related. He says—"The terrestrial causes (after mentioning it as a punishment inflicted on mankind for their sins) are, by common consent of most writers, as followeth; venomous, stinking vapours, arising from standing ponds or pools, ditches, lakes, dunghills, sinks, channels, vaults, or the like; as also, unclean slaughter-houses of beasts, dead carcasses of men, as in time of war, and of stinking fish, fowl, or any thing that hath contained life, and is putrid; as also, more particularly in great cities, as London, the unclean keeping of houses, lanes, alleys, and streets: from those recited, and the like infectious venomous vapours, by warmth of the sun exhaled, are apt and able to infect the living bodies of men, and thereby to produce the plague, as experience too much sheweth."

"According to Dr. St. John, the æriform fluid, which is exhaled from animal bodies in a state of putrefaction, acts at certain times more powerfully than at others, and is indeed in one stage of the process infinitely more noxious than any other elastic fluid yet discovered. Dr. St. John informs, that he knew a gentleman, who, by slightly touching the intestines of a human body, beginning to liberate this corrosive gas, was affected with a violent inflammation, which in a very short time extend-

ed up almost the entire length of his arms, producing an extensive ulcer of the most foul and frightful appearance, which continued for several months, and reduced him to a miserable state of emaciation. He mentions, also, a celebrated professor, who was attacked with a violent inflammation of the nose and fauces, from which he with difficulty recovered, by stooping for an instant over a body, which was beginning to give forth this deleterious fluid. Hence he infers, that the same gas, (carbonic acid) *modified* or *mixed*, or *united* with others, may be the occasion of the *plague*, which has so often threatened to annihilate the human species.

In the war of 1775, in Germany, a destructive fever prevailed, attributed then to an infection of the air by the putrid effluvia from the vast numbers killed in battle, and also to a calm in the atmosphere for a long time.

“Pringle, Jackson, Hume, Mosely, M‘Lane, and a number of other medical writers, ancient and modern, might be cited, in proof that effluvia, from animal and vegetable putrefaction, may give rise to, and are the common causes of, malignant and pestilential diseases. But there is no occasion for consulting books, knowing the opinion of any, or going abroad for confirmation of what has been advanced respecting the origin of malignant diseases. Our own observations, and the evidence of our senses, are quite sufficient to convince, I must not say *all*, that they do not arise from any other cause, so far as any material agent is concerned. Dr. Reynolds, (Webster’s Collection, page 197) states a case of fever in a young woman, evidently excited by the effluvia of a putrid carcass, lying on the borders of a marshy piece of ground, where she was obliged frequently to pass and repass. She was at first affected with violent pains in the head, and sickness at her stomach. On the second day she was bled; but her fever increased, and she became delirious: a number of blisters, surrounded by inflammation, appeared upon her feet and hands, fingers and toes; she died on the fourth day. Dr. Bayley, in his treatise on the epidemic of New-York, in 1795, states a case of fever produced from the exhalations of vegetables in a state of putrefaction. The cause was detected from an unusual and offensive smell, which proceeded from the cellar. Two persons went down to examine, and found, in one corner of a small tight room, a quantity of June cabbages, on which the sun had shone about three hours in a day; they were rotten, and had fallen down in a lump of putrefaction. On being stirred, there immediately issued forth such an intolerable stench, as obliged those in the cellar to quit it instantly. Vomiting came on, which lasted nearly an hour. Three persons in the family were taken with all the leading symptoms of the yellow fever.

There can be no doubt but stagnated water is a very common cause of fever, under any circumstances. It is related in Goldsmith’s *Animated Nature*, that a vessel became becalmed in the ocean, near the Cape of Good Hope. When the water had been perfectly still for some time, its surface was covered with a green slime, and numerous snakes and other animals were seen in different directions. The consequence of this corrupted state of the water, was, that a number of the crew became sick of a fever and soon died. As soon as they were favoured with a breeze, no more were attacked, and recovery of the sick succeed-

ed. This fact shows that a deleterious gas or effluvia proceeded from the water and generated the disease.

2. Human Effluvia.

By this term we understand such a secretion from the body of a person labouring under disease, as is capable of producing another of a similar nature, aided also by filth, heat, and other causes. It occurs in crowded apartments, jails, hospitals, ships, &c. and other places not duly ventilated. Dr. Smith of New-York observes, that this effluvia is especially generated in the apartments of the sick, particularly of those who are labouring under a typhus state of fever. Dr. Eberle of Philadelphia says: "I would restrict this term to those morbid effluvia which are generated by *decomposition* of the animal secretions, whether formed in a state of health or disease, and to the ordinary exhalations from the body, when accumulated in such a manner as to deteriorate the atmosphere of confined rooms, if these be really capable in themselves, and without decomposition, of exciting fevers." This effluvia is the source of typhus and some other continued fevers. Dr. Smith supposes that a mixture, or the combined agency of human or animal and vegetable effluvia, may produce fevers of a novel or anomalous character. "Let us suppose," says he, "the circumstances in which typhus originates to occur in summer, such as the crowding of individuals into small apartments, badly ventilated, and rendered offensive by personal and domestic filth. These causes would obviously produce typhus in its ordinary form. But suppose there exist at the same time those exhalations which occasion plague and yellow fever, or intermittent and remittent fevers. Under such circumstances, we should not expect to see any one of those diseases fully and distinctly formed, but a disease of a novel or modified character." There exists no doubt in my mind, of the correctness of Dr. Smith's observation, that the late Banker-street fever in New-York, as well as the peculiar fever which prevailed among the blacks in this city a few years ago, were engendered by the united influence of these two miasmatal poisons. I once had a striking illustration of the anomalous and fatal character which the united action of marsh and animal effluvia are apt to impart to fever. During the fall of 1814, while attending in the capacity of regimental surgeon in the encampment at Baltimore, ten men affected with mild remitting fever, were lodged in a room of confined dimensions, and as the weather was cold, the room was kept pretty warm by fire, and the doors and windows as little opened as was admissible. The adjoining room was exceedingly crowded with invalids, and but little attention was paid to cleanliness and ventilation. In a short time several cases of fatal typhus occurred in this room. Soon after this, the patients who were affected with intermitting fever in the next room, manifested new and more alarming symptoms; blood began to ooze from their gums; extreme tenderness of the epigastrium occurred; the intellect was but little disturbed; the eyes were dull, watery, and staring; the temperature of the skin and the pulse nearly natural; the animal powers so little prostrated, that one of the men died a few minutes after he had been sitting up with his back leaned against the wall of the room. They

were all immediately removed to the Baltimore Hospital, and all except one died in a few days. There can be no doubt, that this peculiar modification of febrile disease was the result of the impressions of *idiomiasmata* (engendered in the house) made on systems already under the morbid influence of *koino-miasmata*, or marsh and animal effluvia."

Under this head may be enumerated the effluvia or contagion, arising from persons labouring under small-pox, measles, scarlet fever, &c.

There is an instance recorded in the New-England Medical Journal, from Dr. J. A. Allen, in the state of Vermont, of three persons having died in one house of typhus gravior or malignant typhus. The weather being unusually warm, the corpses of the two last suddenly run into the putrefactive process, and not being deposited in coffins sufficiently close, the effluvia evolved was very offensive to the people who attended the funeral ceremonies. Nearly all who were exposed to those septic gases had an attack of the disease; and from the sick it was communicated to their attendants through the season, and thus it became epidemical. The interim of time from exposure to an attack, was from ten to twenty-one days. The spasmodic cholera may be communicated in the same manner.

3. *Animal Effluvia.*

Putrid animal matter is another cause of fever. Magendie found that on exposing different animals to the exhalations arising from putrid animal matter, diseases were produced in them, similar to those produced by pestilential effluvia. It is therefore very probable that such putrid agents floating in the atmosphere, constitute the deleterious principle of putrid animal effluvia, and that the different kinds, or modifications of disease produced by it, depend upon the state of the system, peculiarity of constitution, the quality of noxious effluvia, and the substances from which it is derived.

It has been from this source that many pestilential fevers have originated in different parts of Europe, particularly after battles. The gas or effluvia arising from the decomposition of dead bodies after a battle, when they have been suffered to lay above ground, has caused fevers of the most fatal character.

It appears very evident, that contagious diseases, fevers particularly, are communicated to the system through the medium of the lungs, and not the stomach, as some suppose. The small-pox cannot be communicated by conveying the poison or virus into the stomach, as has been proved; but on exposing animals to the effluvia arising from putrid substances, they became diseased and died. After this poison has been taken into the circulation, it acts as a foreign, or extraneous agent to the internal surface of the heart and arteries, and there is immediately commotion or effort to dislodge it by the skin or the other excretions, and if they perform their offices, well; if the perspiration be not obstructed, or if it be free, such agents or poisonous effluvia will be carried off without much shock or injury to the system. But on the contrary, if it be predisposed to the disease by any means whatever, fever becomes established to effect what the powers of nature are unable to accomplish. It is under such circumstances that her salutary efforts must be aided.

The reason why the stomach is generally so much affected in febrile diseases, is in consequence of the lungs and their appendages being lined with a continuation of the mucus tissue of the *primæ viæ*, or first passages, and therefore being more accessible to the deleterious air or effluvia inhaled or inspired.

Had Broussais reflected upon this fact, his doctrine of fever probably would have been different.

It is stated that forests, a high wall or fence, mountains, hills, &c. are sufficient to prevent the spread of these deleterious gases. Delisle relates many facts to corroborate this statement. A convent situated on Mount Argental, near the village of St. Stephens, was for a long time remarkable for its salubrity, until the trees, with which it was surrounded, were cut down. It then became very sickly.

These deleterious gases are carried to a considerable distance, and communicate fevers. It is stated by Lancisci, that thirty Roman noblemen were sailing near the mouth of the Tiber, when suddenly the wind shifted, and blew over the putrid marshes. Twenty-nine out of the thirty were seized with the intermittent fever. The pestilential effluvia from the swamps of Benin, produced great ravages.

Thunder storms and showers have a powerful tendency to clear the air of pestilential effluvia. After sultry, humid weather, intermittent and other fevers often become prevalent, and they remit after showers or storms.

According to the experiments of Professor Julia, of Lyons, it would appear that:—

1. The deleterious influence of these effluvia, depends on particles of putrid animal or vegetable matter dissolved and suspended in aqueous vapour.

2. The air of marshes does not differ from atmospheric air in any of the principles which chemical analysis can detect.

3. None of the gases, disengaged from bodies in a state of putrefaction, exhibit themselves in a sensible quantity.

4. The disorders caused by marsh effluvia, are not, in any degree, dependent on the predominance of azote.

Among the various remote causes of fever, we may enumerate, great exertions or fatigue, certain passions of the mind suddenly excited, such as fear, grief, and anxiety, unwholesome air, extreme degrees of heat and cold as before illustrated, absorption of pus or matter, indigestible food, suppression of the usual evacuations, external or internal injuries, excessive evacuations, onanism, &c.

Intermediate Causes.

Among the various intermediate causes of fever, may be ranked, a *morbid state of the stomach*, arising either from vitiated bile, worms, or other sources of irritation. This morbid condition of the stomach, however, sometimes arises from the deleterious state of the atmosphere. A late French author, Broussais, maintains that the source of all diseases originates in the stomach and first passages, or the mucous membrano of the alimentary canal. This he terms, *gastro enteritis*. In accordance with this theory, he gives few or no purgatives, but prescribes the

mildest and simplest medicines, leeches over the region of the stomach, glysters, &c.

But the principal and almost only intermediate cause of fever, is obstruction in the capillary vessels; cold, suddenly applied or long continued, acts as a sedative, closes the pores, and thus becomes a powerful intermediate cause of fever. A viscid state of the blood or other fluids, may in part cause this obstruction.

Nature, in such circumstances, appears to be retreating before some powerful invader; but when the sedative powers are violent and suddenly applied, she makes strong efforts to relieve herself, and the gates of this tumultuous city are barred, whilst she is assembling all her forces to expel the enemy; for, during the paroxysm of fever, the pores are strongly closed, whilst the vital energy is evidently concentrated and collected in the heart, which propels the blood with renewed vigour through the arterial system in its whole extent.

It is not found easy to explain how debility produces this spasmodic contraction, but it is imputed to the *vis medicatrix naturæ*, or the law in the animal economy above mentioned, by which motions are excited to obviate the effects of any thing noxious to the constitution; and that the spasm exists, appears from the suppression of all excretions, and the shrinking of the external parts, during the cold stage. This proves an indirect stimulus to the sanguiferous system, by throwing the blood, mixed with acrid perspirable matter, back with violence upon the heart and large arteries, and exciting them to stronger and more frequent contractions; which increased action of the heart and arteries continues till it restores the diminished energy of the brain, extends this energy to the extreme vessels, overcomes the spasm, restores their action, on which sweat breaks forth, the other excretories are also relaxed, and the fever abates.

Proximate Cause.

The proximate or immediate cause of fever, is a retention of acrid, stimulating, or morbid matter or humours, which, instead of being carried off by the outlets or excretions of the system, enter the circulation, and stimulate the heart and arteries to an undue and increased action, to overcome the obstruction of the capillary vessels, and to expel such morbid matter.* *The seat of fever then is in the blood vessels or the vascular system.* It is well known that most fevers follow a sudden check of perspiration. Hence it is evident that the exciting cause must be in the blood, and arise from an excess of stimulus, or a morbid excitement applied to the heart and arteries, or the sanguiferous system. This fact is demonstrated by the phenomena of eruptive disease, small-pox, measles, &c. This infection or contagion is taken into the blood through the medium of the lungs, and as soon as it becomes sufficiently impregnated with the specific humour or virus, a preternatural action of the blood vessels immediately takes place. Nature is aroused, and makes a powerful effort or struggle to expel the poison from the system. As soon as she accomplishes this object, the exciting cause or

* Dr. Mitchill supposed this agent to be carbonic acid gas, mixed with oxygen.

agent in these eruptive complaints is thrown copiously to the surface, and appears in the form of vesicles or eruptions, and when they are thus expelled, the fever immediately subsides, but will reappear, if from debility or other causes, the poison or humour are absorbed. It is the case also in hectic fever, as almost every one knows; matter from the lungs or an ulcer is taken into the circulation, and causes fever. It is also proved from the termination of fever by sweat, and also by fever sores. These facts reduce it to a mathematical demonstration, and render the subject so simple and plain, that it is really a matter of profound astonishment that any one the least acquainted with fever, should be ignorant of their nature, cause, and cure.

“The venous system,” says Bichat, “may be regarded as a general reservoir, into which are poured all the materials which are to be thrown out of the body, and all those which are to enter it. In this last respect, this system of vessels performs an essential part in the production and support of diseases. The deleterious substances may be introduced into the blood-vessels with the chyle, and produce ravages in the system in circulating with the fluids. There can be no doubt, moreover, that besides the principles which convert the venous into arterial blood, there often passes through the lungs into the circulation deleterious miasmata, which produce diseases, as my experiments on asphyxia have proved. The intestines, the lungs, and the skin, are the three avenues through which the morbid agents may gain admission into the circulation.”

If I mistake not, Eberle maintains similar, if not the same views. He observes on the subject of fever: “Besides the source of direct vascular irritation already mentioned, there is another one perhaps still more common and extensive in its influence—namely, retained excrementitious elements, in consequence of accidental glandular torpor or inactivity. ‘If one organ is impeded in its office of ridding the economy of certain noxious materials, and not vicariously supplied by any other, such materials must therefore accumulate in the blood, and become a source of irritation throughout the system; but more especially to the organ whose function it is to eliminate them. Thus, if from certain causes, the elements entering into the composition of bile abound in the system, a source of disorder or of irritation is present in the blood. This irritating cause must act upon those parts which are sensible to its impressions, and to which it is incessantly and immediately applied. Derangement of the whole vascular system becomes the consequence of such irritation offered to the nerves, ramified upon the heart and blood-vessels, but more especially in the organ destined to combine and to secrete, under new forms, the materials now so abundantly presented to it.’ Thus too, if the cutaneous exhalation be arrested in consequence of the sudden influence of cold, a large portion of the recrementitious perspirable matter will be retained in the circulation. If this be not removed out of the system by the vicarious functions of some other organ, the whole mass of the blood will become surcharged with substances which the welfare of the economy requires to be cast off, and which must necessarily impart a morbid, or irritating quality to the blood. This circumstance, therefore, with the internal congestions which usually

attend torpor of the cutaneous exhalents, becomes a direct source of irritation to the heart and arteries, and consequently of febrile excitement."

With all the evidence which we possess, therefore, that the blood frequently becomes charged with substances of an irritating or deleterious character, there can surely exist no reasonable doubt that fever must sometimes be the result of a direct and primary irritation of the heart and arteries; for it will, most assuredly, not be denied that agents which are capable of causing morbid impressions on the nerves of the skin, the alimentary canal, or of any other organ, will be equally capable of producing irritation in the heart and arteries, when they are brought in immediate contact with their internal surface."

These morbid agents may likewise act upon some organ, cause inflammation, and thereby produce symptomatic fever.

The acid sweats, (says a writer) thrown out from the poisoned mass of blood, by means of the small exhalent arteries, in malignant and pestilential diseases forming the matter of infection, and adhering to the bed clothes and linen, which, by its corrosive qualities, it destroys and rots; and, if exerted in any considerable quantity, so commonly relieves the patient, (inasmuch as the volume of poison, contained in the arterial system is thereby lessened,) shows that the blood, in certain diseases, contains something of a noxious nature. The appearances also, which blood, drawn in pestilential fevers, puts on, corresponds with that in which septic gas had been artificially injected. Blood, thus infected with this poison, taken up by the absorbent vessels, will continue to stimulate the heart and arteries, wearing out their excitability, and, consequently, bring on death, if the constitution be incapable of becoming habituated to its stimulus, or a part, or whole, of the stimulus be not subducted. If it be present in any great quantity, it may cause a sudden extinction of the vital principle, as is observed sometimes to happen in highly pestilential diseases.

In a word we may sum up the causes of fever as follows:

1. *Remote Causes.*

1. Cold.
2. Heat.
3. Marsh or vegetable effluvia.
4. Human effluvia.
5. Animal effluvia, to which may be added great exertion and fatigue, the passions, injuries, &c. But cold, or a check of perspiration, no doubt, produces three fourths of febrile diseases.

2. *Intermediate Causes.*

1. Morbid state of the stomach from worms, bile, &c.
2. Obstruction in the capillary vessels.

3. *Proximate Cause.*

Extraneous morbid or deleterious agents, generated in or out of the body, mixed with the blood, and acting as incitants or stimulants upon the internal surface of the heart and arteries, propelling the blood with increased force or velocity, in order to expel these morbid agents by the skin or other outlets or excretions of the system.

SYMPTOMS.

1. *Chills and Heat.*

The first characteristic symptom of fever, is rigor, or chills, succeeded by a preternatural degree of heat. Sometimes the chill is very severe, at other times very light; but fever is almost invariably ushered in by this symptom. The patient complains of great coldness; he shakes and trembles; the skin becomes pale, rough, and shrunken, and sometimes there is a sensation as if cold water was running down the back. After a while, the chillness subsides, and flushings and heat prevail, with a return of the colour of the skin. The eyes and face become red, and the patient now complains of heat. This may be said to constitute the "hot stage" of fever. The continuance of the cold stage is very uncertain. Sometimes it lasts an hour; at other times, it continues several days, with alternate flushings of heat.

I have never seen any satisfactory or reasonable cause assigned for the chill or cold stage of fever. But it appears to me very obvious and self-evident. When the blood, by cold, or any thing else, is obstructed in the blood vessels of the surface, it must recede, be thrown back, and accumulate upon the heart and great blood vessels. Cold, then, as a matter of course, must predominate. The blood or circulation, the cause and seat of animal heat, being cut off, or carried on very partially in the vessels of the skin, there is then experienced a cold sensation, which we call chills or rigors. As soon as an unnatural or a preternatural stimulus of the blood is felt by the heart and arteries, on account of such obstruction, a powerful reaction takes place to overcome it, the heart beats more violent, the pulse is accelerated, and the blood is thrown back into the capillary system, so forcibly as to cause an unnatural or too great a degree of heat, which we term fever. Thus we see that a battle, as it were, occurs between these two contending parties or agents, cold on the one hand, termed chills, and heat on the other, termed fever. If the former (cold) prevails, the disease proves fatal; if the latter, (heat) recovery or health is the result; that is, if it so far prevails, as to overcome the obstruction, or remove the cause of the disease. In other language, there is a struggle between the vital powers and the febrile agent.

2. *Increase of the Pulse.*

Another invariable symptom, is an increase in the frequency of the pulse. It usually becomes more frequent, fuller, and harder; showing clearly the increased action of the heart and arteries, which, however, is modified or altered by various incidental circumstances; by some of the passions; by diet, air, medicine, &c.

3. *Debility.*

Another invariable symptom attendant on fever is debility. There is a sense of languor, lassitude, and fatigue, which is generally increased by any exertion.

4. Pain.

There is pain experienced in different parts of the body; in the head, neck, and along the course of the spine and in the extremities; in the muscles and joints; a sense of soreness of the flesh or bones, and great depression and heaviness is complained of; a general trembling; want of sleep, or it is disturbed and unrefreshing; there is a peevish or fretful temper, and difficult respiration.

5. The Secretions.

All the secretions and excretions of the body, are deranged on or before the accession of fevers. By looking at the tongue, the back part of it in particular, a very unhealthy and morbid appearance will be discovered. It appears coated with a foul substance, and this serves as an index to point out the accumulation of bilious matter, or a disordered state of the stomach. There is usually loss of appetite, nausea, and vomiting. The mouth is dry and clammy; the skin is dry and parched from diminished perspiration; the urine is scanty and high coloured, and there is generally constipation of the bowels, and the evacuations from them are generally dark and fetid. In a word, all the functions of the body are impaired.

6. These are the leading characteristic symptoms of fever, but from various causes and circumstances, there is an infinite number of variations and modifications; but such are the the most prominent features of this class of diseases.

7. Fever is Primary or Symptomatic.

There should be a distinction made and kept in view between primary and symptomatic fever. First, Primary, when it does not arise from any other complaint. Second, When it does arise from some complaint, as injuries, wounds, &c.

8. Restoration of the Secretions.

It is exceedingly important in a practical point of view, ever to bear in mind the method invariably adopted by nature to cure a fever, which is the restoration of the secretions, and in most cases it is by sweat or perspiration. Without this knowledge, there will be error in practice. But when a practitioner is well apprised of this fact, he will at once know what indications to fulfil; in other words, what course of treatment to institute.

COMMON TREATMENT.

The principal and almost only remedies (if such they may be called) resorted to by physicians in this day, are *Mercury*, *Salts*, *Bleeding*, and *Blistering*. I shall not consume time to descant on the impropriety and injurious effects of such practice. This has been, and will be further exemplified in other parts of this work. It is sufficient here to observe, that instead of such treatment proving beneficial, by aiding

nature to overcome the disease, it counteracts her salutary efforts, and either destroys the patient, endangers his life, or protracts his complaint; and should his constitution be sufficiently vigorous to withstand the combined influence of these "Herculean remedies," or, in other words, should the patient recover in spite of them and the violence of the disease, the subsequent effects injure or ruin his health.

The practice is certainly absurd and irrational, and I ask, is it not preposterous in the extreme, and can it be supported by arguments, reason, experience, or facts?

When a person is attacked with a fever, the whole sanguiferous system is stimulated or aroused to throw off or cast out the enemy, and she invariably points, as we before stated, to certain doors, outlets, or excretions of the system as the only natural and proper passages, through which such enemy must be driven from the system; and it is the province of the physician to aid her in this wise and well established effort, and intention; but when such means are made use of, instead of rendering her the necessary assistance, her powers and energies are entirely crushed, weakened, or diminished. First, by bleeding. Second, by administering a poisonous mineral, mercury, and thereby corrupting the fluids and inducing another dangerous disease, perhaps, worse than the first.

I am satisfied that mercury and bleeding in febrile, as well as other diseases, brings on a contaminated state of the blood, and dangerous, if not fatal debility.

REFORMED PRACTICE.

General Indications of Cure.

Restore the suppressed evacuations, or the secretions and excretions. This will remove the offending, or irritating cause, and when this is removed the effect, or in other words the fever, must necessarily cease. In fulfilling this one indication, consists *the whole secret of curing febrile diseases.*

Particular Indications of Cure.

1. Moderate the violence of arterial excitement.
2. Obviate local inflammation and congestion.
3. Support the powers of the system.
4. Relieve urgent symptoms.

The necessity of fulfilling all these indications must be borne in mind by the practitioner. In every modification of fever, it becomes his duty to render himself an assistant of nature.

What she endeavours in the commencement of the disease to accomplish, is, to evacuate the deleterious agents by the proper passages. The whole business of art, therefore, is to assist her in these two efforts of secretion and excretion of the morbid matter. The manner of effecting this, in every particular species of fever, is given under their respective heads; but as we are treating of fever in general, it may be proper to give the general principles of treating them as fevers, without entering into the various subdivisions or modifications.

The remedies which are to be given to assist the secretion and preparation of the morbid and diseased matter, are sudorific, diluting drinks and medicines, such as produce a determination to the surface, evacuate and give a healthy tone to the stomach and bowels, kidneys, &c.

There are few preparations which have a greater tendency to diminish heat; to attenuate viscid humours; remove obstructions; promote perspiration; increase the quantity of urine, than drinking freely of water, or any other weak diluting liquor, of which it is the basis. The necessity of such drinks or liquors, is plainly indicated by the dry tongue, parched skin, and the burning heat, as well as by the extreme thirst of the patient.

Many refrigerant or cooling liquids, suitable to be drank in a fever, may be prepared from fruits; as from tamarine jelly (made similar to currant, or any other jelly;) lemons, oranges, apples, &c. Also infusions or teas of balm, sage, catnip and other medicinal plants, are exceedingly valuable, both on account of the dilutent properties of the water, and the cooling effects of the plants themselves.

Buttermilk moderately acid, and diluted with water, has also been found very useful.

Secretions and Excretions.

I have already stated, that the great secret of curing fever, is the restoration of the secretions and excretions; the violence of the disease, is just in proportion to their torpor or obstruction, and as soon as they are restored, and perform their offices, the whole catalogue of symptoms attendant on fever, at once vanish, like fire before the watery element.

When they are restored to their healthy action, how quick does convalescence take place. The gastric, the alvine, the urinary and perspiratory discharges and functions become natural; the heat of the system equalised; the pulse falls to its natural standard, and with this decline of the febrile commotion, there is a correspondent, healthy action in every organ; the appetite is improved, and strength and health is re-established.

The Stomach.

When we reflect upon the extensive influence of the stomach over the system, and particularly the skin, we shall be able more readily to appreciate the utility of emetics in febrile diseases. It is by reason of this intimate relation and connection between the stomach and every part of the system, that the administration of an emetic, proves so very effectual. It not only cleanses the stomach of any bilious, feculent, irritating, or any morbid matter; but it proves eminently beneficial by the general relaxation which follows it, approaching sometimes almost to fainting, and which extends to the skin, and produces perspiration. They may, as a general rule, be given where there is much nausea, and where there is no peculiarity of constitution to forbid. They are very serviceable in bilious, intermitting, and remitting fevers.

An emetic given in the commencement of a fever, will sometimes remove it, at once. Even when the stomach has been thoroughly cleansed, the exhibition of an emetic, may be advantageously given in con-

sequence of the shock and stimulating effect given to the stomach, liver, and neighbouring organs. Intermittent fever has sometimes been cured by a single emetic.

In some diseases there appears to be such a morbid accumulation, that other medicines will not act upon the living fibre, and therefore this class of medicines, becomes important as a preparatory step in the treatment of fever. In typhus, and other modifications of fever, emetics may be beneficially administered.

"In the typhoid and typhus pneumonica," says Potter, "that occasioned such lamentable mortality, of late years, throughout the United States, emetics, judiciously employed, were more beneficial, than any other remedy. It was indeed a novel spectacle to those who were accustomed to unsheath the lancet in almost every thoracic affection, to behold a pneumonic fever, perhaps an hæmoptoe, removed by the incantation of a single emetic."

"Emetics," says Dr. Chapman, "exhibited early in fevers, (bilious particularly) operating well, will frequently check an attack, and in the more advanced stages, judiciously repeated, we shall find by it the pulse reduced, pain in the head relieved, sickness of the stomach appeased, temperature of the surface lowered, with perspiration, which restores quietness, and hastens a critical solution.

This precept is strongly applicable to the bilious fevers of our own climate, and especially as they occur in the southern states, where they prove exceedingly intractable under any other mode of treatment."

Sydenham has the following judicious remarks on the efficacy of emetics:—"When I have happened," says he, "sometimes carefully to examine the matter thrown up by vomit, and found it neither considerable in bulk, nor of any remarkable bad quality, I have been surprised how it should happen that the patient should be so much relieved thereby; for as soon as the operation is over, the several symptoms, viz. the nausea, anxiety, restlessness, deep sighing, blackness of the tongue, &c. usually abated and went off, so as to leave the remainder of the disease tolerable." Wallace, commenting on this passage, thus observes:—"Sydenham was not aware of the sympathetic affections which take place in the constitution, nor knew that an extremely small portion of morbid matter could produce effects so sudden and surprising from a local action, so as to derange the whole system."

The Bowels.

The intimate relation which exists between the whole of the alimentary tube or canal, the skin, and other parts of the animal economy, points out the necessity of promoting in them a healthy action.

Purgatives, therefore, have a decided good effect in fever. The preternatural excitement of the blood-vessels is sensibly diminished by the exhibition of purgatives. This effect takes place by removing the feculent matter which they contain, and by stimulating the exhalent vessels of the mucus membrane of the intestines, causing them to pour out copious effusions from the blood, or circulating mass. Their importance must be seen in a striking view, when the length of the intestines is considered, which is about thirty feet, and also their office.

There is an immense number of vessels, opening into them through their whole extent, and from which there is poured out a vast quantity of feculent matter; and when there is a preternatural stimulus given to the intestines by purgatives, there is a sympathetic affection of the whole system; the circulation becomes more equal, the pulse is lowered, pain in the head, and other parts diminished, or removed, and there is a sensible improvement. Dr. Dewees has the following excellent remarks on the utility of purgatives in febrile diseases:—

“In fevers of almost every description, purging is not only useful, but in many, is indispensable. There exists constantly a want of equilibrium in the circulatory system whenever the body is attacked with fever, and the determination for the most part, is, to the brain, the liver, the spleen, or to the lungs; and few remedies are found so effectual in restoring this want of balance, as well chosen, and properly adapted aperients. Besides the determinations just mentioned, fecal matter in the bowels, is constantly accumulating which it is of much consequence to remove. Occasionally there will be a redundancy of bile; at other times a deficiency; and we are obliged sometimes to remove the one, or to solicit the other, and both of these ends are answered by the proper choice, and exhibition of cathartics.

“Purges, besides cleansing the bowels of offensive matter, cause to be discharged into the bowels a considerable quantity of the fluids natural to these parts, and thus serve the double purpose of removing their fecal contents, as well as evacuating from the general system. For effecting these purposes, however, some cathartics are much more valuable than others, consequently there is a choice. We shall not enter here more fully than we have into a detail of them. Designing in the treatment of each disease, as they may be necessary to point out those that are proper. The management of cathartics must be regulated, first, by the state of the system in general, and of the bowels in particular; they are indicated when the system maintains its general vigour, and where the bowels are still loaded, or not sufficiently cleansed—the pulse will direct in the one instance, and the appearance of the evacuations in the other.

“There is a popular prejudice against purging, that we should be glad to remove, viz. that they are “*very weakening*.” Purging, like every other evacuation may be carried too far; and then with strict propriety it may be said to be “*very weakening*,” but this is only the abuse or mal-administration of a remedy. In many instances of fever, the patient is so far from being weakened by being purged, that he is *absolutely strengthened* by it. This has been repeatedly exemplified in yellow fever. We have known patients faint, when labouring under this disease, upon being merely put in an upright position; yet after a free purging, and other evacuations, they have been able to get out of bed, and walk the floor. Now were these remedies directly weakening, the contrary of this should have happened. And again it is frequently said, when these medicines are about to be administered, that they cannot be necessary, for there is nothing inside of the patient to bring away; and as a proof of this, they will declare “the patient has eaten nothing for a number of days.”

"This popular language and feeling must be disregarded, if we do not mean to injure the patient, especially where attention has been paid to the quantity and nature of the discharges; and where we are convinced, that much remains to be removed. For we have frequently seen after the purging process has been continued for a considerable time, and where the friends of the patient were convinced there was "nothing inside," large, hard, and fetid evacuations have succeeded those "water stools," and the patient has been almost immediately restored to health."

We could say much upon this important subject, but our limits will not permit.

Attention should be paid to the time when they are to be administered—they should not be given, (unless it would be the loss of precious time to procrastinate,) so as to interfere with the night's rest of the patient; nor should they be used, so that they shall interfere with the "sweating period of fever."

Great care is necessary to guard the patient against the injurious effects of cold, while under the operation of physic. If he is able to rise from his bed, a cloak or blanket should be thrown around him.

Repetition of Purgatives.

Purgatives may be repeated daily, and in the morning before any nourishment is taken, in those fevers which ordinarily run their course in a short time; such as inflammatory and yellow fever. In those of longer duration, such as typhus and other continued fevers, they may be given every other morning, or once in three days may be sufficient, (according to the state of the disease, and other circumstances,) provided no particular symptoms, or state of the system contra-indicate.—Moderate doses of physic in general are sufficient, except in the onset or commencement of a fever, when a brisk purgative may be administered.

The Pores, or Capillary System.

It appears that febrile diseases, in their very nature and essence, consist in a derangement of the skin or capillary system; and that no means will subdue a fever, until these functions are restored. We must be convinced of the necessity of this, from the extensive surface of the skin; its connection with the stomach and sanguiferous system, and its important office in casting off superfluous and noxious matter. It is calculated that two-thirds of what is taken into the system, is evaporated by sensible or insensible perspiration. Hence it will be seen what mischief will arise from a retention of this perspirable matter, and what benefit will also follow by restoring this secretion. Another great benefit to be derived from perspiration, is the evaporation that constantly takes place on the surface, which keeps the skin cool and soft.

Diaphoretic or sudarific medicine, then, reduces general excitement, and is one excellent method of depleting the system. Evacuations from the skin, invariably lessen the force of the heart and arteries, by taking from the circulation every agent which is useless or injurious, and by relaxing the constriction of the surface, they remove congestions by a

determination of blood to the extreme vessels; and in a word, lay the axe, as it were, at the root of the disease.

No sooner does perspiration break out in a febrile patient, than there is a mitigation of all the symptoms; the dry, pale, and husky state of the skin is removed; the balance in the circulation is restored, and very often a violent attack of fever is cut short as soon as free sweating takes place. The object then should be immediately to restore perspiration, and continue it throughout the course of the fever; not violent sweating, but moderate perspiration, or a gentle moisture of the skin. It is by this moisture, or the dry and parched state of the skin, that we form a favourable or unfavourable opinion of the fever. If natural perspiration cannot be promoted, we predict danger. On the contrary, if it can be promoted and kept up, we predict a favourable issue. Indeed on this depends the basis of our prognosis.

Sudorific or sweating medicine must therefore be given, but not too freely, especially after a few first days from the accession, or the attack. If those medicines, which are very stimulating, will not fulfil this indication, or will not answer the purpose, then others must be given; such as will have the desired effect without increasing the heat of the body, as Virginia snake-root, sage, lemon-balm, catnip, amaranthus, &c.

The following refrigerant or cooling drink I have administered with excellent effect:

Take the juice of a lemon.

Cream of tartar, *supertartrate of potash*, one teaspoonful.

Add a pint of water.

Then sweeten with loaf sugar.

Whenever the patient is thirsty, let it be freely drank.

I recently cured a violent continued fever by giving this drink alone, and bathing the surface with weak ley water about three times a-day. The effect was almost immediate, and the fever removed in a very short time. The nature of the preparation, although simple, will convince the reader that it possesses very cooling or anti-febrile properties. It promotes the discharge of urine, is laxative, antiseptic, and refrigerant.

The Kidneys.

When the kidneys cease to perform their offices, or do it imperfectly, the urine is scanty, or is much diminished. This fluid is retained carried into the circulation, and must prove a source of irritation; and hence the necessity of restoring the secretion of them.

Diuretic medicines, therefore, or such as promote a discharge of urine must be administered, and it will be found that as the urine begins to flow freely, there is diminished arterial excitement. It is the case, that fevers and other inflammatory diseases are brought to a favourable termination by a spontaneous discharge of this fluid.

An infusion of spearmint possesses a remarkable diuretic property, and it may be drank freely. It not only acts upon the kidneys, but likewise upon the skin, and often allays nausea and irritability of the stomach.

The Lungs.

The lungs is an organ to which strict attention must be paid. It is the *primum mobile*, or main spring of the system; its office being to supply it with the vital principle. If this is withheld, or if they absorb impure air, the fever is exasperated. It is therefore necessary to place the patient in a large, well ventilated room.

The method of suppressing fevers by this means, was practised by the ancients: they exposed their patients to cold air, and gave them cold water to drink. Fresh air is very salutary to a person in a fever, it removes his anxiety, cools the blood, revives the spirits, and is in every view beneficial. There ought, therefore, to be a constant stream of fresh air in his chamber, so as to keep it moderately cool. Air that has been repeatedly breathed, when the blood is inflamed, or the humours are in a putrid state, becomes unfit for respiration, and acquires a noxious quality.

The lungs also become affected by sympathy, and where this is the case, irritation and cough succeed. Under such circumstances, expectorants must be given.

Local Treatment.

Attention must be paid to particular symptoms, such as soreness of the throat, pain in the head or other parts, from congestion or an unusual quantity of blood thrown upon some other organ; for sickness at the stomach, &c.

The Surface.

A tenacious, viscid, perspirable matter, is deposited upon the surface of the body in febrile diseases, which dries upon it, and becomes an additional mean of keeping the pores closed or obstructed. The usual moisture being gone, as before mentioned, a preternatural degree of heat is generated, which creates great distress and protracts the fever. This state of the system, obviously points out the propriety and necessity of *bathing the surface* very frequently. It removes every thing which obstructs perspiration externally, by relaxing the cutaneous vessels, and the evaporation which follows, diminishes the temperature of the body surprisingly. Nothing is better for this purpose than warm water to which ley has been added.

“According to Sir John Chardin, the celebrated traveller, the Persian physicians, devoted followers of the Galenical school, had frequent recourse to bathing in febrile diseases. His own case is a remarkable example of their practice in particular. He had with him a French surgeon who gave him every assistance in his power during the violent remittent fever with which Sir John was attacked; but on arriving at Laar they concluded to send for the governor’s physician. The latter on his arrival stated the nature of the disease (the fever of Bender), and, contrary to the gloomy prognostics of Sir John and his professional friend, promised a speedy cure. Chardin called out, “I am dying of heat.” “I know it,” said he, “but you shall soon be cooled.”

““As in the extreme heat of my fever,” says Chardin, ‘I thought no-

thing could be so delicious as drinking snow-water, I sent to beg a little snow of the governor, who sent me some about eleven o'clock; and as I then had the most raging thirst, I drank with more pleasure and avidity than I had ever done in my life. My apothecary was always near me. It was he who administered the liquid to me. He filled a large vase with barley-water and willow-water, put a large lump of snow into it, and, when it was half melted, gave me the vessel, and desired me to drink my fill. The pleasure I had in drinking was the greater, because the liquid was very agreeable to the taste, and I took it by the physician's desire. I was lying on the ground floor of the house, in a cool room, my bed stretched on the ground. Every hour the floor was watered, so that it might be said to have been quite covered with water. But nothing could allay the heat of my malignant fever, which seemed to be irritated rather than abated by so many cooling remedies. My apothecary then ordered my bed to be taken up, saying it heated me; and he spread a thin mat in its place, upon which he made me lie down in my shirt, without any other coverings, and then made two men come and fan me. But this was of no avail, the heat continued as oppressive as ever. The apothecary, who paid me the most constant attention, then procured two buckets of cold water, and having placed me on a chair, on which I was supported by two men, poured the water over my body little by little, from the haunches downwards, and then taking a large bottle of rose-water, bathed, in the same manner, my head, face, arms, and breast. I blessed, in my heart, the Persian practice of medicine, which treated sick persons so voluptuously! But our French surgeon, who was always by me, could not contain his indignation. 'The man is killing you, sir,' said he to me in a compassionate tone. 'What! *bathe* you with cold water in the heat of a malignant fever, with a pint of emulsion, two pints of decoction, and a pound of confection in your belly, with I do not know how many draughts of snow-water. Depend upon it,' added he, 'that instead of being very soon without fever, as he has promised you, your death will be the end of the business.'—'I do not know what will happen,' answered I, 'but at any rate I do not feel as if I were about to die, as you suppose.' Indeed at that moment I felt the heat within me diminish, and my senses return; upon which my apothecary, having felt my pulse, said, 'your fever is abating.' It went off from that time so quickly, that by one o'clock in the afternoon I was quite free from it, even in the opinion of the French surgeon. He was quite astonished, and I was transported with joy. After having offered up my devotions to God, as to the first cause of my recovery, I said to the apothecary, that to complete my happiness I must see my physician. He will return, said he, by the time the medicines have operated. I took them, as I have said, at nine in the morning, and I had only since that time experienced a kind of heaviness, which swelled me up very much without griping me, so that I imagined they would have no effect upon me, and that their efficacy was exhausted in my continued sweating. But in a quarter of an hour afterwards a looseness seized me, and lasted two whole hours, without any pain or uneasiness. In the evening the physician came to see me, and I received him as a prophet, or as Esculapius himself.

He had learned from the apothecary how I had spent the day, and he ordered me a mess of rice boiled in water, with cinnamon and the bark of dried pomegranate pounded together. I had taken no nourishment whatever for five days.

“On the 28th, when I awoke, I was a little feverish, on which account the physician, when he came to see me, ordered me an emulsion of the *cold seeds* (melon, cucumber, gourds, and pompions), and a dose of the confection, as the day before, recommending that I should eat raw cucumbers. These remedies were given to me at nine o'clock in the morning, and I did nothing all day but drink, most deliciously, willow-water, and barley-water, cooled with snow, eating raw cucumbers, water-melons and pears. Verjuice, in considerable quantity, was put into the mess which I took at noon and in the evening, to give it an agreeable taste, and it most wonderfully lessened my thirst.

“The next morning, the physician having found me still rather feverish, ordered me medicines similar to those I had taken on the 27th. These purged me during the whole day with so much violence, that I had nearly sunk several times under the effects. The night was still worse than the day, as I passed it in pain, with a violence increase of fever. My physician found me in that state, and, as usual, filled me with consolation; for, after having felt my pulse attentively, he told me that he was going to give me some draughts that would carry off what fever remained, and deliver me from it entirely. This certainly took place, but I do not know how he accomplished it. I only know that about nine o'clock in the morning I took two pints of emulsion, with a large dose of confection, as on the preceding days, and half an hour afterwards a julep; after which I fell asleep, and when I awoke in the afternoon, my head was clear, I was without fever, perfectly tranquil, and, as I thought, entirely restored to health.

“I was so much transported with joy, that I could not find utterance to my feelings, relying on the word of my physician, whom I thought an oracle, that the fever would return no more.

“On the morning of the 31st he confirmed his opinion, and ordered me to live ten days together on chicken and rice, without any thing else; at the end of which time he said I might live as usual. I asked him how many days it would be before I could pursue my journey? He told me that two more days of repose would be sufficient, and that I might then set out on horse-back. He once more ordered me a great dose of emulsions and cordials, as before.

“On the first of June he came to see me for the last time, saying that I was not any longer in need of his visits; that he had ordered the apothecary to bring me the materials of ten emulsions, and to teach my servant how to prepare them.

“On the third of June, Sir John Chardin proceeded on his journey, and experienced no relapse; and on the 17th he reached Chiraz, in a convalescent state and still weak, but otherwise so well that he left off his medicines.”

Dr. Currie, very properly supposes that the fever under which Sir John Chardin suffered, was the bilious remittent fever. The cold, it is to be observed, was applied in this case during the height of the paroxysm

when the heat and thirst were the most urgent. "The laxative medicines were no doubt of service in carrying off the morbid contents of the alimentary canal; but they seem to have been carried to excess on the 29th May, and to this circumstance the return of fever may be imputed. The bitter medicine was no doubt a decoction or infusion of some vegetable, in its qualities resembling the bark; and the cooling confection was certainly the celebrated mirthridate, a combination of opium and aromatics, well known over the eastern as well as the western world."

In Abyssinia, according to Bruce, the practice of using cold water, externally as well as by drink, is very general in the violent fevers of that country. Remembering, however, the high heat of that region throughout the year, we must be aware that the temperature of the water is proportionably elevated, probably equal to 76 or even 80 degrees of Fahrenheit. Savary tells us that the Egyptians pursue nearly a similar practice in their fevers.

"In the revolutions of our science," says a writer, "the practice alluded to, seems to have been rejected, or lost sight of, for many centuries. Nearly a hundred years ago, however, an attempt was made to revive it by a writer who entertained such extravagant notions of its efficacy in the inflammatory fevers, that he denominated cold water *febrifugum magnum*, or the great febrifuge. Yet the remedy in no one of its applications gained much ground, antecedently to the appearance of the celebrated work of Currie, since which time its utility has been fully confirmed by the concurrent experience of many of the most distinguished practitioners in various sections of the world.

"This mode of treating disease has not been generally adopted in the United States, certainly not to the same extent as in Britain, and her colonial dependencies in the East and West Indies, which may, in part, be owing to our attachment to the lancet, and other directly depleting remedies, operating, to a certain degree, in a similar way. Cold abutions are sparingly used in our autumnal fevers, to allay heat of the skin, and ice is habitually applied in the inflammatory attacks of the head. But in the European hospitals, nothing is more common than to see patients, in the early stage of typhus fever, placed under a shower bath, or to have water dashed upon them. Nearly the same course was pursued in scarlatina, and in the whole of the complaints, in short, where a heated surface exists. The effect, most commonly, was a free perspiration, followed, as is usual, by highly beneficial tendencies. Yet in the exanthemata, the practice, to such extent, can hardly be justified from the danger of repelling the eruption. Cases of death are reported from it, and I have seen it, in several instances, productive of mischief."

Bathing with cold water, in many stages and types of fever, is a very excellent remedy, yet I have proved that in most cases, tepid or warm water is preferable. It is not followed by the sedative and debilitating effect that cold water sometimes is.

Again, bathing the surface is by far much better and much more convenient, than throwing or dashing it upon the patient. It is almost if not quite impossible, to raise a very sick and exhausted person from his bed, and support him long enough to apply water in this manner.

But by applying it in the way I have recommended, the patient is very little disturbed, and it can be repeated as he lays in bed, and that as often as it may be necessary.

I recollect attending a girl many years ago of typhus fever, where I ordered the nurse in connection with other means, to bathe the surface at night thoroughly with rain water mixed with ley.* I called in the morning, and found that the skin was very dry, parched and shrunk, heat great. I expressed my disappointment, and asked her if she had followed my directions. She replied that she had: (a falsehood by the bye,) I could not, however, account for the symptoms, for I had never in all my practice, been deceived in regard to the happy effect of this process. I, however, directed the same medicine to be given through the day, and the surface to be bathed at night, as before directed. In the morning, I again called, and found my patient just as I anticipated the day previous, in a fine perspiration; skin cool; arterial excitement, and of course, the heat diminished, and all the symptoms manifestly better.

The woman or nurse then had the candour to acknowledge the deception she had used. She said that she had not, as she before stated to me, bathed the surface the first night, as I directed it, from a supposition that it was too simple to do any good, but that the preceding night, she had strictly followed my directions, and had applied the liquid freely over the whole surface of the body; and the consequence was, as before intimated, a remarkable change for the better. Thus we see from this circumstance, first, the folly and criminality of refusing to administer medicine, because it is apparently simple, and secondly, the reprehensible conduct of those nurses who pretend to be wiser than the physician.†

* It is very necessary that ley should be added; first, Because the nature of the perspirable matter is such, being very greasy or oily, and being so tenacious and viscid, that it appears almost to cement or close the pores; or at any rate, it adheres so closely to the surface, that simple water will not effectually remove it. Ley, by its cleansing, and purifying properties, completely removes it. Secondly, It not only cleanses, but appears to soften the skin, and invites perspiration by its stimulating or relaxing nature. I have applied various liquids, such as spirits, vinegar, &c. But the skin is not left in the same state. Even pearl-ash water will not leave the skin so soft and moist. Besides it seems more caustic and heating in its effects. Ley should be used which has been well leached, as it appears to acquire new, or different properties by the oxygen which it imbibes from the atmosphere.

Not only so, I am inclined to think, that the momentum of blood is diminished, by the sympathetic effect produced by stimulating the cuticular vessels of the surface. It certainly must effect the internal organs of the system directly, or indirectly, from the fact, that if one function is deranged or healthy, there is a correspondent effect in others.

† The following circumstance in relation to this subject, will show how easily any improvement can be introduced when it is sanctioned, or supposed to be sanctioned by high authority. One of the graduates of our school on his way home to West New-Jersey, was taken ill of a fever in Philadelphia. He gave directions that the whole surface should be repeatedly bathed, which was attended with the most salutary effect. Those who attended him, however, were not aware that he was a student of our school, and the treatment, therefore, was taken up by a physician near the city, who, by some means, had heard of the effects of it; and supposed

The Feet.

Every one knows that fevers are occasioned by the application of cold to the feet, which drives the blood from the extremities, and throws it upon some organ, or retains such agents as ought to be eliminated, in consequence of which fever takes place. Now it must be evident that there is no better method of preventing the consequences, than by recalling the blood to the feet and surface, thereby preventing and removing fever, than by bathing the feet in warm water, to which a small quantity of ley has been added.

I am persuaded that the act of bathing the feet immediately after exposure to wet or cold, in nine cases out of ten will prevent an attack of fever, aided by drinking freely of warm catnip tea, then covering warm in bed.

Medicine.

All violent medicines are to be avoided in fevers, such as antimony, mercury, or any other mineral whatever; also blood-letting. Nature attempts to do her office placidly, and quietly in these cases, and such medicines violently disturb her motions, and often bring on mischief, which she, if left entirely to herself, would wholly avoid.

Rest and Quietude.

Lassitude, or heaviness, is generally the consequence of a recent fever; and this symptom evinces the propriety of keeping the patient easy, and, if possible, in bed: lying in bed relaxes the spasms, abates the violence of the circulation, and gives nature an opportunity of exerting her whole force to overcome the disease. The bed alone would often remove a fever in its early stage.

The patient, says Dr. Fordyce, is to be confined to his bed, where unnecessary exertion is avoided, and the heat is equable over the whole body. The bed-chamber is to be large, and heated when necessary by fuel, burning in an open fire-place; or cooled by sprinkling the floor with infusions, vinegar, or distilled waters of some of the aromatic herbs.

It is of the utmost importance that the patient lay upon a straw bed or mattress, as a feather bed increases the fever.

The Mind.

If the patient's spirits, in a fever, are low and depressed, he should not only be supported with cordials, but every method should be taken to cheer and comfort his mind, by conversing on subjects that are pleasant and agreeable, and cautiously avoiding every syllable that may create uneasiness. Every thing indeed that disturbs the imagination promotes the disease. In fevers every person ought to be kept perfectly quiet, and not be permitted to hear or see any thing which might discompose the mind.

ing that it was sanctioned by the medical faculty of Philadelphia, commenced the same process of bathing the surface with decided benefit, in every case of fever under his care. Now had he known the source whence it originated, he probably would have rejected it because not sanctioned by different, or orthodox authority.

Drinks.

We have already hinted at the propriety of taking freely of diluent drinks; and this should by no means be neglected. Such kinds may be given, as are pleasant and agreeable to the person, and such as are calculated to keep up a moisture of the surface.

Cold or cool water may be taken at proper intervals, and in proper quantities when the heat of the body is uniformly above the natural standard, or when there is no chill or sensation of coldness. There has ever been a very popular prejudice against the use of cold water in fevers, and which ought to be put down. There are few articles in the whole *Materia Medica*, which exert such an immediate and salutary effect in fevers, as cold water; but too great a quantity should not be taken into the stomach at a time, as it sometimes overloads it, and causes mischief. There are thousands of instances on record, where nature has pointed out the cure by creating in the mind of the febrile patient, an irresistible desire for draughts of cold water, and when drank, it has been followed by the happiest effects; by a remission of all the symptoms. Celsus directs large draughts of the coldest water in ardent fevers, and dwells with emphasis, on the highly beneficial consequences of it. "The patient," says he, "falls into a sound sleep, the heat remits, and a free perspiration ensues, though he had previously suffered much from thirst, heat, and restlessness."

Vegetable acids are discarded by some, as injurious, but without foundation. They moderate thirst, allay heat, and are very grateful and pleasant to the patient. Nothing of the kind is better than lemonade, which may be freely taken after the skin has become properly relaxed, or perspiration takes place. Buttermilk mixed with water is a very nourishing and cooling drink.

General St. Clair, who was once a physician, was wont to cure the scarlet fever, by causing the patient to drink, several times each day, of buttermilk, moderately acid, and as much of buttermilk-whey, as the patient could take. This rarely, if ever, failed of a cure.

Regimen.

The dictates of Nature must be followed as regards food, or regimen in fevers; though the patient has the greatest inclination for drink, yet he seldom has any appetite for solid food, hence the absurdity of urging him to take victuals; much solid food in fever is very injurious. It oppresses the stomach, and instead of nourishing the patient, serves only to increase the disease. The food that is taken, must be vegetable, very light, and easy of digestion. It should consist chiefly of panado, thin gruel, roasted apples, &c.

Ripe fruit of every kind is excellent, such as apples, oranges, grapes, &c.

Cravings.

Particular attention should be paid to the cravings of a patient. They are often the calls of nature, and point out the remedy.

They are not to be indulged in every thing that their capricious ap-

petites may desire, but when any particular article is eagerly desired, it may be given, although it may seem not altogether proper.

Convalescence.

Few are aware of the danger of a relapse in fevers. The lives of thousands have been lost for the want of proper care on recovering from a fever. The stomach and body is extremely weak, and hence will not bear much food, or exercise, and in which convalescent persons are very liable to indulge.

Nursing.

In vain will the best medicine be given without a proper nurse or person to administer it, and to attend faithfully to every duty of her office or business. It is very seldom that we find a good nurse, as profitable and as important as the profession is.

Some are ignorant, some careless and inattentive.

I know not but that I may say, that more depends upon a good nurse than upon the physician. It is the duty of the nurse to punctually administer the medicine prescribed, according to the directions given, (except they *know* it is poison) and not to cheat the physician by throwing it into the fire, and then give their own nostrums or some others, and when interrogated respecting it, dissemble and lie by *affirming* that it *has* been given. This practice is very reprehensible, no matter what kind of practitioner attends the patient. Let the physician be discharged, or follow his prescriptions.

It is the duty of the nurse to pay strict attention, also, to the wants of the sick, to the medicines, drink, diet, &c. that they be given in right quantities, and in a right time; that the clothes of the patient and his bed, be often changed, and kept clean. Also, that every thing offensive, be immediately removed. Let the room be kept well ventilated, clean, and quiet.

It is not her duty to dictate and pretend to know more than the person who prescribes, nor to suffer a dozen gossips, or women, to associate together, and recommend new doctors, patent medicines, nostrums, &c. or to make use of any language, calculated to excite distrust, unnecessary alarm or fear of the patient or friends. Great mischief is often done by such a course of conduct, and all classes of physicians suffer much by it. Nurses who are guilty of such deportment, ought to be at once *discharged*.*

* Would it not be a good plan for a number of respectable middle aged females, to associate themselves together, and receive lectures or instructions from an experienced physician or nurse, and after having become well qualified by theory and practice, to receive a certificate or recommendation from the society?

This would inspire confidence in the public, or in the minds of the sick, and such nurses would command much more respect, and better wages.

CHAPTER I.

INTERMITTENT FEVER, OR FEVER AND AGUE.

(Febris Intermittens.)

DESCRIPTION.

THE title of Intermittent, is applied to that kind of fever which consists of a succession of paroxysms, between each of which, there is a distinct and perfect intermission from febrile symptoms.

Different names have been applied to this fever, according to the distance of time observed between the periods of its return.

1. When it comes on within the space of every twenty-four hours, it is called a quotidian.

2. When it returns every other day, or there is a space of forty-eight hours between its attacks, it is called a tertian.

3. When it attends on the first and fourth day, with an interval of seventy-two hours, it is named a quartan. That under the tertian type is most apt to prevail in the spring, and is indeed the most frequent form of the disease. The quartan is the most obstinate and dangerous, being chiefly prevalent in autumn. The quotidian is more likely than the others to assume the continued type.

Of the quotidian, tertian, and quartan intermittents, there are several varieties and forms; as the double tertian, having a paroxysm every day, with the alternate paroxysms similar to one another. The double tertian, with two paroxysms on one day, and another on the next. The double quartan, with two paroxysms on the first day, none on the second and third, and two again on the fourth day. The double quartan, with a paroxysm on the first day, another on the second, but none on the third. The triple quartan, with three paroxysms every fourth day. The triple quartan, with a paroxysm every day, every fourth paroxysm being similar. When these fevers arise in the spring of the year, they are called *vernal*; and when in autumn, they are known by the name of *autumnal*. Intermittents often prove obstinate, and are of long duration in warm climates; and they not unfrequently resist the common mode of treatment, so as to become very distressing to the patient, and often give rise to other chronic complaints, but more particularly anasarca or dropsical swellings, and an enlargement of the liver, or spleen.

CAUSES.

It seems to be pretty generally acknowledged, that marsh miasma, or the effluvia arising from stagnated water, or marshy ground, when acted upon by heat, are the most frequent exciting causes of this fever. In marshes, the putrefaction of vegetable and animal matter is always going forward, it is to be presumed; and hence it has been generally conjectured, that vegetable or animal putrefaction imparted a peculiar quality to the watery particles of the effluvia arising from thence. We

are not yet acquainted with all the circumstances which are requisite to render marsh miasma or effluvia productive of intermittents. According to observation, it has been ascertained, that marsh miasma, when much diluted with aqueous exhalation, as in summers where an unusual quantity of rain has fallen, are nearly inert; but when arising from stagnant waters of a concentrated foulness, in consequence of great drought and heat in the latter end of summer, and the early part of autumn, they act with great violence and malignity.

In admitting the powers of marsh effluvia to produce intermittents, we ought not, at the same time, to look on them as their universal cause, since it is found that persons residing constantly in the most healthy part of cities, and far remote from marshes, are sometimes attacked by them.

The testimony of writers proves, that febrile miasma or effluvia, may be wafted by currents of air to a distance far exceeding what has been supposed, or admitted upon this subject.

This disease may also be occasioned by debility, however induced, by a poor watery diet, damp houses, evening dews, lying upon the damp ground, watching, fatigue, depressing passions of the mind, &c.

When the inhabitants of a high country remove to a low one, they are generally seized with intermittent fevers, and to such the disease is most apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

One peculiarity of this fever is, its great susceptibility of a renewal from very slight causes, as from the prevalence of an easterly wind, or from the repetition of the original exciting cause. It would appear likewise, that a predisposition is left in the habit, which favours the recurrence of the complaint. In this circumstance, intermittents differ from most other fevers, as it is well known that after a continued fever has once occurred, and been completely removed, the person so affected is by no means so liable to a fresh attack of the disorder, as one in whom it had never taken place. Sometimes intermittents degenerate into continued fevers.

SYMPTOMS.

This disease may be divided into three stages, viz.

1. The cold stage.
2. The hot stage.
3. The sweating stage.

Cold Stage.—An intermitting fever generally begins with pain of the head and loins, weariness of the limbs, coldness of the extremities, stretching, yawning, with sometimes great sickness and vomiting; to which succeed shivering and violent shaking.

Hot Stage.—After a longer or shorter continuance of shivering, the heat of the body gradually returns; irregularly at first, and by transient flushes, soon, however, succeeded by a steady, dry, and burning heat, considerably augmenting above the natural standard. The skin, which before was pale and constricted, becomes now swollen, tense, and red;

and is remarkably sensible to the touch. The sensibility, diminished in the cold stages, is now preternaturally acute; pains attack the head, and flying pains are felt over various parts of the body. The pulse is quick, strong, and hard; the tongue white, the thirst is great, and the urine is high coloured.

Sweating Stage.—A moisture is at length observed to break out upon the face and neck, which soon becomes universal and uniform. The heat falls to its ordinary standard; the pulse diminishes in frequency, and becomes full and free; the urine deposits a sediment; the bowels are no longer confined; respiration is free and full; all the functions are restored to their natural order; when, after a specific interval, the paroxysm returns, and performs the same successional evolutions.

PROGNOSIS.

When the paroxysms are of short duration, regular in their recurrence, and leave the intervals quite free, we may expect a speedy recovery; but when they are long, violent, and attended with much anxiety and delirium, the symptoms are less favourable. Other unfavourable symptoms are, great prostration of strength, vertigo, fetid excretions, the presence of dysentery, cholera morbus, enlargements of the liver and spleen, inducing dropsy or jaundice, and convulsions occurring during the paroxysm preceded by coma. Relapses are very common to this fever, at the distance even of five or six months, or even a year; and autumnal intermittents are more difficult to remove than vernal ones. Much, however, depends upon the treatment.

DISSECTION.

Dissections of those who have died of an intermittent, show a morbid state of many of the viscera of the thorax and abdomen; but the liver, and organs concerned in the formation of bile, as likewise the spleen and mesentery, are those which are usually most affected.

COMMON TREATMENT. :

Bleeding in the cold and hot stage is by some recommended; mercury, salts, antimony, arsenic, sulphate of quinine, nitre, zinc, &c.

REFORMED PRACTICE.

Indications of Cure.—The indications of cure in the treatment of intermittents, are, first, to put as speedy a stop as possible to the fit, when it has taken place; and, secondly, during the intermission to prevent its return, at the usual or any after period, both by exciting a new action in the system, by administering certain remedies at the commencement or immediately before the accession of the cold fit, thereby destroying the morbid action induced by the cause of the disease, and by invigorating the body.

It will be necessary, in treating intermittent fever, first, to cleanse the stomach and bowels. A purgative, often, will be sufficient, but the soonest and the most effectual method of curing the complaint, is to administer first an emetic. The liver and stomach, are in a very morbid condition, viscid phlegm and bile being discharged by vomiting. For this purpose give the

Common Emetic.*

When it begins to produce sickness, the patient ought to drink freely of an infusion of *boneset*, (*eupatorium perfoliatum*.)

Emetics not only cleanse the stomach, but increase perspiration, and all the other secretions, which render them of such importance, that they often cure without any other medicine.

Should any peculiar temperament, debility or state of the system, render it injudicious to administer an emetic, it must be dispensed with, and a moderate purgative given:

Take Mandrake, or May-apple root, (*podophyllum peltatum*.) pulverized.

Cream of Tartar, (*super. tart. potassa*.) equal parts.

Of this powder give an ordinary sized teaspoonful. Let this be put into a teacup or tumbler, and a small lump of loaf sugar added. Add a gill of boiling water, or it may be given in any syrup. Let the whole be taken at a dose. This will cleanse the stomach and bowels, and prepare the system for tonics.

Cold Stage.—Should it be necessary to prescribe at, or just before the accession of the cold stage, it will be desirable to diminish its force, and to lessen its duration; for on this circumstance, will depend, the continuance, or duration of the other stages of the complaint. If suitable means are used to cut it short, the hot and sweating stages will be proportionably short, and often the disease entirely cured. To this end, let stimulating and warm teas be freely taken, such as Virginia snake root, infusion or tea of boneset and peppermint, which are calculated to answer this purpose. The person may be covered with warm clothing, heated bricks may be placed to the feet, and every means used to promote perspiration.

Hot Stage.—As soon as the cold stage is terminated this treatment must be reversed. The bed clothes must be removed, and instead of giving warm infusions, cold drinks may be given. Lemonade is very grateful, and particularly cold water, both of which may be freely taken. This course will allay the febrile excitement.

Sweating Stage.—During this stage, warm and cold drinks must be withheld, and those that are tepid, given; wine-whey, buttermilk, &c. may be taken.

Intermission.—During the intermission of the fever, such medicines must be taken, as will prevent a recurrence of the paroxysm.

* I have already stated in the preliminary remarks, that every formula, or prescription, the component parts of which are not mentioned, will be found under the head of PHARMACY.

As soon as the fever leaves the patient, give the following *Pills*.

Take the extract of the best Peruvian bark, form into pills of ordinary size, (three grains each) let two or three of these be taken as the stomach will bear, every three hours, or if the paroxysm occurs daily, every two hours, until the accession of another chill, when they must be omitted, and the means recommended above, recommenced, and given again when the fever, succeeding the chills, has subsided.

Many practitioners rely almost wholly on the salts of bark, (sulphate of quinine) but there are objections to the general use of this article. Some has been found to contain arsenic, and the use of it has been followed by swelling of the face, spleen, liver, &c. When all other means have failed, I have found the following preparation almost, if not quite, infallible:

Take Jesuits', or Peruvian bark, (*cinchona*,) one ounce.

Flowers of sulphur, (*flores sulphuris*,) two drams.

Wild cherry-tree bark, (*prunus Virginiana*,) half an ounce.

Cinnamon.

Cloves.

Nutmegs, of each one dram.

Maderia, or sweet wine, three pints.

Pulverize the ingredients, and add them to the wine. It is fit for use in an hour.

The patient will take of this tincture, from half a wine glass to a wine glass full every two or three hours during the intermission. This treatment cures in a very short time, usually in one or two days.

Vomiting.—Sometimes in intermittent fever, there is great irritability of the stomach; vomiting ensues, and prevents the operation of those medicines that are necessary to effect a cure, or to remove it. When this is the case, dissolve one dram of sal æratus, (Bicarbonas Potassæ) in eight ounces of distilled peppermint water, or as a substitute in the same quantity of a tea or infusion of peppermint. Of this, give an ordinary sized table spoonful sweetened with loaf sugar, every half hour, or as often as vomiting occurs. Should this preparation fail to check the vomiting, (which is seldom the case) then add to every table spoonful of it, five drops of laudanum, tincture of opium.

Should the above medicines, from debility, or any cause be rejected, the following may be taken.

Take pure salts of bark, (*sulphats quinina*,) twenty-four grains.

Divide into twelve powders.

Let one be taken in currant jelly or any other vehicle, every two hours, while the person is free from fever. It is scarcely necessary to state, that these bracing or tonic preparations are to be discontinued upon an accession of the chill.

This course of treatment must be repeated, until the complaint is removed.

The intermittent fever sometimes attacks infants and children. When this is the case, the quinine can be administered more easily than any other preparation, particularly in the following liquid form, which deprives it of its bitter taste.

Take sulphate of quinine, sixteen grains.

Lemon juice, twenty drops.

Loaf sugar, a suitable quantity.

Water, two ounces. Mix.

The dose is a tea-spoonful every two hours, for a child between two and five years of age.

It is sometimes the case, that the chill is almost wholly or entirely removed, but some fever and much debility remain. When such symptoms occur, an emetic must be given every two or three days. This will give tone and energy to the stomach, and restore the patient to health. When the chills and fever subside, give a purgative.

Various other medicines have been highly extolled for the cure of intermittent fever, but we have tried most of them with little or no success. Such as cobweb, coffee, opium, spiders, spirits, the juice of gourds, &c. &c.

These nostrums should be carefully guarded against.

A lady in South Carolina, was recommended to take the latter article, namely, the juice of the gourd, which soon proved fatal.

REGIMEN.

In the intermission, or between the paroxysms, the patient must be supported by nutritious diet, such as is easy of digestion. Vegetable food is preferable. He may take infusions of bitter herbs, such as boneset, snake-root, chamomile or wormwood. The patient may also take exercise as much as his strength will permit. Nothing tends more to protract the intermittent fever, than indulgence in idleness. Small quantities of mustard and cayenne pepper, may be taken as condiments with food.

Hundreds of cases might be mentioned of the efficacy of the foregoing treatment, many of which had been treated by various physicians without any benefit.

Some pretend to cure the *fever* and *ague* by charms, and amulets, or a supernatural power.

A woman of this city of undoubted veracity, related to me the following circumstance:

She states that she had been afflicted with the intermitting fever for a great length of time; it had reduced her very much, was very obstinate, and had become very serious. She had received the best medical aid in vain. Having heard much of a man in the city, who professed to cure the complaint by some means without medicine, she applied to him. He asked her if she had faith to believe that the Lord Jesus Christ could cure her. She replied in the affirmative. He then told her that she would only have one chill more, and that it would be very light; apparently using some invocation, and muttering over some unintelligible language. His statement proved true—the next chill was very trivial, and she never afterwards had a single attack.

This will probably be imputed to the influence of the mind upon the body, and perhaps it is so; but while we admit the effect of the imagination, we must not impute the interposition of a merciful Being to human agency, or other frivolous causes, or agents.

PREVENTION.

A change of air is the surest prevention, but it is not always convenient for a person to change his residence. To such, the following advice is very judicious.

“The inhabitants of our southern states, and of the low swampy situations on the Delaware river, &c. are peculiarly liable to the attacks of intermitting fevers; but those affected with it, who resort to the salubrious air of New-England, experience a speedy cure, and that frequently without the aid of medicine. To prevent the attacks of agues, or their recurrence when once cured, care should be taken to avoid the influence of the hot sun, and the damp air of morning and evening; a flannel shirt should be constantly worn next the skin, and regularly changed once a week.”

The following preparation will be found a valuable preventive:

Take white-wood bark, (*liriodendron tulipefera*,) half an ounce.

Dog-wood bark, (*cornus Florida*,) half an ounce.

Bruise, and add one pint of boiling water; let it stand two hours, then add one pint of best gin.

Of this, let from half to a wine glass full be taken night and morning on an empty stomach.

If fires are kept burning in the sitting rooms, mornings and evenings, during the damp seasons, they will be found useful by depriving the air of its unhealthy moisture, and keeping the walls dry. “By this practice,” says Dr. Mease, “I have known the health of a family in the swamps of Delaware, preserved during a whole summer, while the neighbours were all afflicted by agues.” Dr. Rush recommended that fires should not only be kept in the house during the sickly months, but that large fires be made every evening, of brush, near the house, between it and the spots from whence the exhalations are derived. This practice, he observed, should be continued till the appearance of two or three frosts; for frosts, as well as heavy rains in the autumnal months, never fail to put a stop to the progress of intermittents.

CHAPTER II.

REMITTENT FEVER. (*Febris Remittens.*)

DESCRIPTION.

By a remittent fever is to be understood that modification of fever which abates, but does not go entirely off before a fresh attack ensues; or, in other words, where one paroxysm succeeds another so quickly, that the patient is never without some degree of fever.

CAUSES.

Remittent fever is principally induced, as well as the intermittent, by exhalations from marshy ground, or from stagnant water, impregnated with the decaying remains of animal and vegetable substances, and is most apt to arise when calm, close and sultry weather quickly succeed heavy rains, or great inundations. In warm climates, particularly as we approach the tropics, where great heat and moisture rapidly succeed each other, the remittent is a very prevalent type of fever, and often appears under a highly aggravated and violent form, prevailing epidemically. It is likewise often met with in low marshy situations, abounding with wood and water, from which miasma, or effluvia, are consequently evolved; and it most generally attacks those of a relaxed habit, those who undergo great fatigue, and those who breathe an impure air, and make use of a poor and unwholesome diet. Although this fever is produced originally by marsh miasma, and in its simple state, is consequently not of an infectious nature; still, under bad management, such as crowding too many sick together, and neglecting proper cleanliness, and a free ventilation, there cannot be a doubt that it may in its course, engender a matter capable of occasioning a highly contagious fever.

SYMPTOMS.

An attack of a common remittent fever is very similar to that of an intermittent. Preceding the attack, the person usually feels heavy and languid, anxiety, sighing, yawning, and alternate fits of heat and cold.—In the commencement he experiences pain in the head and back, heat of the whole system, thirst, difficulty of breathing, and great dejection of spirits. The pain of the back and legs is very similar to the inflammatory rheumatism. The eyes and skin assume a yellow tinge, there is pain and a sense of fulness about the region of the stomach, nausea, and sometimes vomiting of mucous or bilious matter. The urine is scanty and of a yellowish colour, the skin is usually very dry and hot;

after these symptoms continue for a short time, a gentle perspiration takes place, and the fever abates, or goes off imperfectly, but not so as to leave the patient free from some fever. This remission continues, perhaps not more than an hour or two. The fever then commences again as severe as before, and perhaps worse; and after a short period, again abates and gives place to another remission. In this manner with accessions and remissions it proceeds at last to a crisis, or is changed into a fever of a different type. In warm climates the remissions often occur so early as the second day; but in cold ones it frequently does not take place, until from the fourth, the sixth, or eighth day.

Sometimes the attack of fever is much more violent in all its symptoms, severe delirium arises, and soon carries off the patient, or the remission is scarcely observable, and is succeeded by another paroxysm, on which all the symptoms are much aggravated. The heat of the system is much increased, countenance flush, thirst very great, tongue coated with a dark brown fur, breathing laborious, and the pulse quick, throbbing, and tremulous. Some time after, another short but imperfect remission occurs, but the fever returns with greater violence, and finally destroys the patient.

The symptoms attending the remittent fever are very apt to vary according to the situation and constitution of the patient; likewise the season of the year, and other circumstances. In warm climates the remittent fever often becomes very aggravated and dangerous. It assumes a putrid character from its commencement. Such fever attacks the patient very suddenly, and with great violence; the chills are slight, but the heat soon becomes very intense, thirst is excessive, head-ache violent, pain in various parts of the system very excruciating, sickness of the stomach, with great fulness and oppression, and respiration impeded or difficult. A considerable remission will take place in twenty-four hours, when another paroxysm will commence more violent than the first: the eyes become very yellow, red and watery, incessant vomiting or retching; after a while another remission takes place, and thus the paroxysms continue to recur until a crisis follows.

There is great prostration of strength, and in an advanced and aggravated stage of the disease, very malignant appearances are manifest. All the symptoms are very similar to the remittent fever of temperate latitudes, only they are more exasperated and malignant in their character.

The liver, stomach, and first passages are in a very morbid condition, particularly in warm climates.

Towards the close of the remittent fever, very copious and dark coloured bilious matter is discharged from the bowels, which often terminates the complaint. No age or sex is exempt from this fever, but the inhabitants of warm climates are less liable to its attack, than strangers or those from colder regions. Doctor Cartwright gives an account of an epidemic remittent fever which prevailed in the county of Monroe, (Mississippi) in the fall of 1822, which strikingly illustrates some varieties of this fever.

"The disease," he says, "was generally ushered in by a distinct chill, which was speedily followed by intense heat, thirst, and head-ache, and very severe pains in the loins. The anxiety and difficulty of breath-

ing, the deadly sickness, sense of weight, heaviness, and pain in the stomach, increased as the fever approached its acme, until the suffering became intolerable. The exacerbations generally occurred in the evening, and a considerable remission, amounting in some cases to a perfect intermission, took place on the ensuing morning. On the evening of the second day a sudden and unexpected paroxysm, more violent than the first one, came on, which was attended with a most horrid sensation of pain and oppression of the stomach, accompanied with deadly sickness and continued vomiting, *but with the ejection of very little fluid of any kind.* The bowels during the first and second paroxysms were always in a state of obstinate constipation. About noon of the third day the third paroxysm generally came on. During this paroxysm the skin usually felt rather cooler than natural, and the pulse was commonly remarkably slow. By placing the hand on the abdomen, a pulsation was felt equal to that which the heart produces in the thorax, and synchronous with the pulsations of that organ." During the first two paroxysms the tongue was but little furred; but in the third it assumed a much worse appearance, having a dark red line running from its extremity over its dorsum, which soon changed to a black colour. The skin began to acquire a yellow colour during the third paroxysm. The paroxysms continued to recur until the fifth, seventh, or ninth day, when either death took place, or "enormous dark-coloured evacuations from the bowels occurred, and the patient commenced to convalesce."

That the reader may have an opportunity of witnessing the symptoms of the remittent fever, as it occurs in various sections of the United States, and under different circumstances, we subjoin a letter from Dr. Norcum, Edenton, (N. C.)

"The annual remitting fever of Edenton, and the country in its vicinity, usually begins with the month of August, and I have remarked that the most malignant cases always occur in this month, or during the hot weather of September. As the autumn advances, and the heat decreases, fevers of every grade seem disposed to assume more and more the character of intermittents, which generally conclude the sickness of the season. The remitting fever with us, as far as I have been able to ascertain, is most fatal in seasons tending to dryness, and accompanied with unusual heat. In its character and symptoms it is as various as the circumstances of the climate and season under which it exists. Sometimes persons are seized violently without any previous indisposition, with a chill, or mixed sensations of heat and chilliness, that last for an hour or two, and are succeeded by a severe fever, with pains in the head and back, a full, hard, quick, and bounding pulse, great thirst, a hot and dry skin, hurried respiration, with redness or a muddy suffusion of the eyes, and a disposition to delirium. The stomach, in this form of the fever, does not seem to be affected with much sickness or nausea; yet vomiting is a frequent occurrence, and it is with difficulty that a patient can retain the least particle of food whatever. A sense of heat or burning is generally complained of, which is very distressing, and occasions every thing to be thrown up that is swallowed if it contains stimulus, or be in any way substantial. The exacerbations of the fever are oftenest quotidian, returning generally in the afternoon, and the intervals short, with

an imperfect remission, without sweating, or any considerable abatement of pain.

BILIOUS REMITTENT FEVER.

Another form of remitting fever, which is the true bilious remittent of our climate, (continues Dr. Norcum,) comes on with a distinct chilly fit, of greater or less duration, and is succeeded by the ordinary symptoms of fever, with a frequent, full, and soft pulse, such as may almost always be felt in the paroxysm of an intermittent. It is not accompanied with much acute pain, but great aching and restlessness, nausea or vomiting, with ejections of bile, or matter exhibiting a bilious appearance. The type of this fever is generally that of a double tertian, having an exacerbation one day in the afternoon, the next, in the evening. Its remissions are more distinct than those of the inflammatory remittent. It is rarely fatal, and when it is, seldom terminates in less than from ten to sixteen or seventeen days. Towards its close it sometimes puts on the garb of typhus, and does not end in death, or a recovery, in less than from twenty to thirty days. The fever last described is that which we usually meet with, which affects the greatest number of persons at a time, and is the least mortal of any of our continued fevers. Neither the inflammatory nor the bilious remittent, is very fatal; the former, however, is much the more so, in the proportion I should suppose of at least three to one. It either ends fatally in from four to eight or nine days, or favourably somewhere between the eighth and thirteenth, but is not unfrequently protracted to a later period: the fatal issue generally occurs early in the disease.

The tongue in the bilious remittent is commonly furred and yellow; the skin likewise exhibits a yellow hue, which increases as the fever progresses: whereas in the inflammatory remittent, the tongue exhibits the common febrile fur in most cases without yellowness, and the skin is hardly ever discoloured until about the close of the complaint. In two or three instances I have known the surface of the body to turn yellow soon after death, from the inflammatory remittent, when not the smallest discolouration had been observed before. The vomiting in one of these fevers, or forms of fever, (which you please,) is different from that which attends the other: In the first it occurs with little nausea, or sickness; is seldom attended with bilious discharges; affords scarce any relief, and is always increased by bark and stimulants. In the last it is preceded by great nausea, attended with large discharges of bile, which gives the patient relief."

Discharges of blood rarely occur in either of these fevers; in one or two cases, I have seen blood discharged from the gums.

"I am not quite certain that I have ever seen the black vomit in any of our endemic fevers; but a vomiting of black matter of various descriptions is no unfrequent occurrence. In 1799, when we had a true yellow fever in Edenton, I saw the genuine black vomit in several cases: but I do not believe I have ever seen exactly the same thing since: though I confess I have seen perhaps half a dozen cases in which my suspicions have been strongly excited. Hemorrhages from the nose

and gums are occasionally met with in protracted cases ending fatally; and I remember one case of a malignant nature, in which a bleeding from the mouth took place, that ended in death in three or four days. Glandular swellings, so far as my observation has extended, have not been among the characteristics of any of our fevers. In most of the fatal cases of inflammatory remitting fever which have fallen under my notice, the heat of the skin has continued intense until a short time before dissolution, and the patient has expired in a paroxysm or exacerbation of fever. The bilious remittent, when about to prove mortal in a majority of instances, puts on the garb of typhus, and terminates with the symptoms common in the last stage of that disease.

I have thus given an account of two forms of fever, as they appear in the tract of country to which my practice has been confined; and all the continued remitting, or what are usually denominated bilious fevers, incident to our climate, seem to me to be only modifications, or variations of these two original and distinct diseases. Neither the inflammatory nor the bilious remittent always attack and progress precisely as in the history I have sketched. They both vary in their modes of attack, in duration, in violence, in the remissions and exacerbations that attend them, and in many of their less essential symptoms. Nevertheless, I feel persuaded that, from the description I have given, the peculiar and distinguishing character of each will be sufficiently manifest."

Doctor Thacher, in speaking of the bilious remitting fever of this climate, thus observes:—"When a continual remitting or intermitting fever is accompanied with a frequent and copious evacuation of bile, either by vomit or stool, the fever is denominated bilious. A fever of this character frequently exists in the United States, and from the season in which it is most prevalent, it has been termed autumnal fever. According to Dr. Rush, it prevailed in Philadelphia in the autumn of 1780. It came on with rigour, giddiness in the head, and faintness. The fever was accompanied with acute pains in the head, eye-balls, back, and limbs, sometimes affecting the neck and arms and unusual soreness of the flesh resembling rheumatism. So exquisitely severe were the pains and soreness in every part of the body, that the patient could not lie in bed, and from these circumstances the disorder obtained the name of the *Break-bone fever*.* A nausea, and sometimes a vomiting, attended; the pulse was quick and full, but seldom hard. The tongue and skin were generally moist, and the former was tinged with a yellowish colour. Remissions, or at least, exacerbations were observed, morning and evening. A rash often appeared on the third and fourth day, which proved favourable. When the fever did not terminate before the fourteenth or twentieth day, it assumed in its progress the usual symptoms of the typhus."

PROGNOSIS.

A remittent fever is always attended with some hazard, particularly

* A strong decoction of boneset, *Eupatorium Perfoliatum*, proved a sovereign remedy in this fever. It must be drunk warm at night, and cold through the day, and must be taken freely.

in warm climates, in which it usually goes through its course in the space of five or six days; but in cold ones, its crisis is not usually effected until the twelfth or fourteenth. The shorter and more obscure the remissions are, the greater will be the danger; and each succeeding paroxysm is attended with more risk than the former. On the contrary, the milder the attack, and the nearer the fever approaches to an inter-mittent, the fairer will be the prospect of a recovery.

DISSECTION.

The usual appearances on dissection are, congestions of blood in the liver and spleen, inflammations in the alimentary tube, a distended state of the venous vessels of the brain, and serous effusion into the cavities of that organ.

COMMON TREATMENT.

Bleeding, mercury, antimony, salts, blisters, &c.

REFORMED PRACTICE.

Indications of Cure.

1. Moderate the violence of arterial action, if too great.
2. Remove the tension and obstruction in the capillary vessels of the skin.
3. Cleanse the stomach and first passages, and restore a healthy action of the same.
4. Restore the secretions and excretions.
5. Support the strength of the system.

In order to cure this fever, we must endeavour to bring it to a regular intermission. To effect which give,

1. *Emetics*.—There has been much controversy among physicians respecting the propriety of administering emetics in remittent fevers. Some have stated that they are beneficial, others injurious. Antimony, no doubt, has generally been given, which, from its violent effects upon the system, has proved hurtful. But vegetable emetics, in the first stages of the fever, particularly, proves very serviceable. It often disarms fever of the greatest part of its violence and malignity, and reduces it, comparatively, to a simple type, requiring afterwards very mild means to effect a cure. Numerous cases might be cited to prove that suitable emetics, have arrested the disease; not only in its forming stage, but after it has become fairly established, the

Common Emetic,

may be given as directed, and occasionally repeated according to the violence or duration of the disease.

Purgatives.—It will be necessary after the operation of the emetic, and when the sickness at the stomach has fully subsided, to administer a vegetable purgative. If the bowels are very costive, it may be given very soon after the operation; otherwise a period of six hours may

previously intervene. The following formula will be found very effectual:

Take pulverized jalap, (*conrol. jalapa.*) one part.

Pulv. Alexandria senna, (*senna Alexand.*) two parts.

Cream of Tartar, (*supertartras potassæ.*) one part. Mix.

Of this powder give a teaspoonful to an adult every three hours till it purges; the first dose is usually sufficient.

Put the powder into a teacup, add a small lump of loaf sugar, and a gill of boiling water. When cool, or nearly cool, let the whole be taken on an empty stomach. During the operation of it, indian meal gruel may be taken. This purgative may be repeated every other day, or every third day without reference to the state of the bowels, according to symptoms and circumstances. The benefit is derived, not so much from evacuating the contents of the stomach and bowels, as by expelling the morbid agents from the system, and by exciting a healthy action of the liver, stomach, and intestines.

Sudorifics.—It is exceedingly important in this as well as all other fevers, to attend particularly to the skin. This circumstance is lamentably neglected by physicians. Some pay little or no attention to it, but like Dr. Sangrado, substitute bleeding. It is impossible to treat fever successfully, or to act as a servant of nature, without restoring the obstruction which invariably exists in the capillary vessels. It appears to be the first great effort of the system to fulfil this indication. Such medicines then must be given, as will have the effect of producing perspiration. The feet must be frequently bathed in warm rain water, to which a suitable quantity of ley has been added; the patient may then take the following sudorific drops:

Take Virginia snake-root, (*serpentaria Virginiana.*)

Saffron, (*crocus sativus.*)

Ipecac, (*callicoc. ipecacuanha.*) pulverized,

Gum camphor, (*gummi camphora.*)

Opium, (*papaver somniferum*) of each one dram.

Best gin, 8 oz. Mix.

After this has stood a sufficient length of time to extract the strength of the articles, a teaspoonful may be given in a tumbler full of an infusion of *catnip*, sweetened or not, as may be preferred; to be repeated every two hours until perspiration takes place. The infusion of *catnip* must be taken frequently and freely, to aid the operation of the medicine. These drops may be occasionally repeated to continue perspiration. One or two doses generally is sufficient to cause sweating; and when it has taken place, they must be omitted, and given occasionally to continue a moisture of the skin.

They possess anodyne, as well as diaphoretic properties. Hence they are useful in allaying the nervous irritation attendant on this type of fever. They may be repeated daily, in the same manner, if the fever does not subside, or the skin is very dry and parched, particularly in the first stages. It is sometimes the case, that in the middle and last stages of the fever, these drops prove too stimulating; the patient cannot bear them, or any thing of a similar nature. It then becomes ne-

cessary to substitute, in their place, such medicines as keep up a determination to the surface, without increasing the heat of the body. Under such circumstances, the following infusion may be given:

Take amaranthus or crawley root, (*pterospera andromedea*) pulv. 1 table spoonful. Add a pint of boiling water.

This infusion may be freely drank; it keeps the skin moist, without proving too stimulating. Give also an infusion of *boneset* cold through the day, and warm at night.

Bathing the surface.—Those who are unacquainted with the effects of bathing the surface, cannot appreciate its value, and it therefore must by no means be neglected.

Rain or spring water, may be used for this purpose, to which sufficient ley has been added as to render it mucilaginous, or slightly caustic to the tongue. When the heat is very great, this may be applied over the whole surface. In general it is best to apply it tepid, or moderately warm, but in some cases, it proves more serviceable to apply it quite cold. The manner of using it should be as follows: Place the vessel containing the liquid, by the side of the patient's bed, then let an assistant, or the nurse raise the clothes from the body, with one hand, and with a piece of flannel or muslin, dipt in the liquid, thoroughly rub first one side of the surface, from the neck to the feet, with the other. The patient must then be turned upon the opposite side, and bathed in the same manner. This process is invariably attended with a salutary effect. It may be repeated every two or three hours, or as often as the heat of the system becomes very considerable, until a remission or partial remission takes place. This process removes the slimy, viscid, and perspirable matter, which is thrown upon the surface, and which assists in obstructing the pores of the skin. It removes the tension and spasm of the capillaries, by its relaxing properties. It likewise diminishes the preternatural heat, by the evaporation which takes place. A writer speaking of cold effusion, thus remarks:

“The cold effusion has been found productive of the most decided good effects in remittent fevers. This should be employed at the height of the paroxysm, when the sensations of heat are violent, the headache severe, and the skin dry. The effects to be observed from the cold effusion, are an alleviation of the violent symptoms, a tendency to quiet sleep is soon induced, the skin becomes moist, and a distinct remission follows.”

Dilutents.—Various drinks may be given possessing diluent, and diaphoretic properties, such as infusions of *balm*, *mint*, and *catnip*; but few articles in the whole materia medica are of more essential benefit than cold water. The parched lips, dry mouth, intolerable thirst, and the great heat of the system, all call loudly for the use of this universal diluent liquid. It may be taken freely at all times, except when chills are present. Should it however produce any uneasiness, or fullness of the stomach, it must be taken in smaller quantities, and repeated oftener. There are an infinite number of cases on record, where the free use of water *internally* and *externally* have cured fevers in their forming and even advanced stages.

Lemonade may also be freely drank as a change, except when stimulating medicines are given to produce perspiration. In such cases it ought not to be taken except very warm.

Anodynes.—when the patient is very restless, and unable to sleep, ten grains of the

Diaphoretic Powders

may be taken in currant jelly, or any other suitable vehicle. They are less stimulating than the drops before mentioned, and to fulfil this indication, answer sometimes a better purpose. They should generally be given at night. These powders not only have the effect of procuring sleep, but likewise cause a moisture of the surface.

Tonics.—I have often given tonics in fevers when there was some little remission, but have seen little or no benefit from them. There is one article, however, that may be given with benefit, which combine tonic and diaphoretic properties:

Take Virginia snake-root, (*Serp. Virginiana*.)

Add boiling water. To be given occasionally through the day.

An infusion of boneset, may also be given.

Having spoken of the general treatment of remittent fever, I shall now speak of particular symptoms.

Head-ache.—There is usually great pain in the head, to relieve which the feet must be frequently bathed in warm water, and the following plaster or sinapism applied to them:

Take Indian-meal.

Mustard, equal parts.

Add vinegar sufficient to form a plaster, or paste.

If the pain and heat of the head be great, apply the following lotion:

Take spirits,

Vinegar, .

Rain-water, equal parts.

To a pint of which, add a teaspoonful of salt.

Let this be repeatedly applied to the head, nearly cold. It is necessary to apply a cap, or handkerchief over the head, to prevent a too speedy evaporation.

Sickness at the stomach.—This symptom is very common, and extremely distressing. To allay which, give an infusion of *spearmint*, (*mentha sativa*.) Sometimes the peppermint given in the same manner proves even more serviceable. The same articles bruised and mixed with a small quantity of vinegar, and applied over the pit or region of the stomach, has proved very effectual.

Should not this allay the vomiting, the following mixture may be given:

Fresh lemon-juice, a table-spoonful.

Sal æratus, (*bi-carbonas potassæ*.) half of an ordinary teaspoonful.

Put the lemon-juice into a wine-glass, and fill it with water, then add the sal æratus made fine; to be immediately taken when added, or in a state of effervescence (foaming.) This may be repeated as often as the sickness returns.

Or what is still better, is the

Salts of lemon-juice, (*acidum citricum*,) half a teaspoonful, or 30 grains.
Sal aeratus, (*bi-carbonas potassæ*,) an equal quantity.

Each article must be separately pulverized, and put in separate tumblers, containing a gill of water, each, and when dissolved must be taken in a state of effervescence; the contents of one tumbler must be poured into the other, and immediately drank. The common soda powders, taken according to the directions printed upon them, will answer very well, if the above articles cannot be procured. If one or two doses of the above effervescing draught should fail to check the vomiting, then add to every succeeding dose ten drops of laudanum. The following plaster may be applied over the region of the stomach:

Take Cloves, pulverized,
Ginger,
Alspice,
Cinnamon,
Mustard, each one table-spoonful, and
One nutmeg, grated.

Mix and moisten with vinegar, and apply warm to the stomach.

Local pains and congestions.—When any particular part or organ is very much affected, fomentation of bitter herbs must be applied.—Should these not remove the irritation, a mustard-plaster may be applied; a considerable portion of indian-meal to be added to prevent the flesh from becoming excoriated.

Canker.—If there are aphthous spots in the mouth, or if the throat is sore, let it be gargled with a decoction made of *sage* and *hyssop*, sweetened with honey, to which a little powdered borax has been added.

Debility or Prostration.—Should there be great prostration of strength, the pulse low, and there is a necessity for rousing nature, wine-why may be given, pure wine or wine-sling, or a small quantity of porter. Should either, however, increase the fever, it must be omitted.

Cough.—Should there be a cough, demulcent and mucilaginous medicines must be given, a decoction of *hoarhound* sweetened with honey, and such as are mentioned under this head.

Mustard Plasters.—Many apply blisters in this and almost every kind of fever, but I think that they should be seldom if ever applied. They are very tormenting, often produce great excitement, and sometimes mortify. I have occasionally applied them, when pain in the head or any particular part has been very great; but more recently, I have used the mustard-plaster in preference. I think it much better in every respect.

Dr. Anthony Hunn, of Kentucky, a very aged and learned physician, has written a treatise against the common method of treatment in febrile diseases. He proscribes almost all medicine in a fever, and uses only a blister on the right side, over the region of the liver. The benefit, he says, depends upon the stimulus it gives to this organ. He deprecates the use of the lancet and mercury, after having practiced about half a century upon the common, or ordinary plan.

Relapses.—It is of the utmost importance that the patient, as soon as a state of convalescence takes place, should use every precaution to prevent a relapse. His diet should be very spare and principally vegetable, and he should use moderate exercise.

REGIMEN.

The regimen must be adapted to the prevailing symptoms. When there are any signs of inflammation, the diet must be slender, and the drink weak and diluting. But when nervous or putrid symptoms prevail, it will be necessary to support the patient with food and liquors of a more generous nature, such as are recommended in the preceding fever. We must, however, be very cautious in the use of stimulating articles, as this fever is frequently changed into a *continued*, by a hot regimen, and improper medicines.

Whatever the symptoms are, the patient ought to be kept cool, quiet, and clean. His apartment, if possible, should be large, and frequently ventilated by letting in fresh air at the doors and windows. It ought likewise to be sprinkled with vinegar, juice of lemon, or the like. His linen, bed clothes, &c. should be frequently changed, and all his excrements immediately removed. Though these things have been recommended before, we think it necessary to repeat them here, as they are of more importance to the sick than practitioners are apt to imagine.

“The patient’s shirt, bed-clothes, and bedding” says Doctor Lind, “ought frequently to be changed, and exposed to the air, and all his excrements immediately removed; the bed-chamber should be well ventilated, and frequently sprinkled with vinegar; in short, every attention should be paid to the patient. I can affirm, that a physician who puts these in practice will much oftener succeed, than one who is even more skilful, but has not an opportunity of using these means.”

When the above treatment has been strictly followed, I have never known it fail of curing this type of fever. I have been called to treat it in its various stages, and have uniformly found the same result from the practice.

I have never found it necessary in any case to give a particle of mercury, or any other mineral, or to bleed a single patient.

CHAPTER III.

INFLAMMATORY FEVER. (*Synocha.*)

DESCRIPTION.

This type of fever is characterized by great inflammation, intense heat, frequent, strong and hard pulse, flushed countenance, redness of the face, &c. It may be readily distinguished from typhus, by its being attended with symptoms much more inflammatory. It makes its attacks at all seasons of the year, but is most prevalent in the spring. Persons of all ages and habits are subject to it, but more especially those in the vigor of life, with strong elastic fibres and plethoric constitution. It is a species of fever almost peculiar to cold and temperate climates, being rarely met with in warm ones.

CAUSES.

Remote cause.—This fever may be produced by a variety of causes, but cold is the most common, and it is sometimes likewise occasioned by heat: also by intemperance in eating and drinking, stimulating kinds of food and liquid, and whatever else causes plethora; but sudden transitions from heat to cold is the most frequent cause of inflammatory fever. Exposing the body in a state of perspiration to cold will bring it on: lying on damp ground, drinking cold liquor when a person is very hot, repelled eruptions, suppressed evacuations, &c.

Proximate cause.—The proximate cause of this disease is seated in the sanguiferous or vascular system, in the heart, arteries, and capillary vessels. Cold checks perspiration, by which irritating, perspirable matter is taken into the circulation, and stimulates the blood vessels to an undue and increased action.

By reference to Eberle's practice, I perceive that he maintains a similar opinion of the proximate cause of inflammatory fever. He thus observes: "a large proportion of the recrementitious elements of perspirable matter must remain mingled with the blood, (unless speedily removed by the vicarious action of some other emunctory,) and necessarily impart to this fluid qualities which are not natural to it. Most assuredly the retention of materials which have become useless to the system, and for whose constant elimination nature has provided so extensive a series of emunctories as the cutaneous exhalents, cannot be long tolerated by the animal economy with entire impunity. The blood is the natural stimulant of the sanguiferous vessels, and we must believe that its stimulating qualities are naturally in due and harmonious relation with the sensibility and irritability of its appropriate vessels. When, therefore, in consequence of suppressed perspiration, this fluid becomes surcharged with the elements of recrementitious perspirable matter, its natural relations with the heart, arteries, and capillaries will be destroyed, and irritation more or less intense must almost necessarily ensue."

SYMPTOMS.

The attack of inflammatory fever is generally very sudden; commencing with distinct rigors or chills—the patient complains of debility, which is succeeded by dizziness and pain in the head, back, and more or less over the whole body. These symptoms are soon succeeded by redness or flushing of the face; the eyes assume a red and an unnatural appearance, and are intolerant to light. There is great throbbing of the carotid and temporal arteries, great restlessness, heat which is intense and biting, thirst, difficult respiration and sickness at the stomach. The pulse is very full, hard, and quick, compressed with difficulty. If the attack is very severe, or if the fever is not arrested in the beginning, stupor and delirium will intervene, particularly in the latter stages. The mouth, throat, tongue and lips are very dry, and gradually become dark, the tongue of a scarlet color at the sides and furred with white in the centre. Occasionally there is an hæmorrhage, or bleeding from the nose; there is sometimes yellowness of the skin and it is very dry and parched, swelling of the abdomen, the urine is scanty, red, or high colored, and there is usually constipation of the bowels. These symptoms undergo slight remissions, and exacerbations—the first occurs in the morning and the latter in the evening.

This fever generally goes through its course in one or two weeks, and often terminates critically, by perspiration, by diarrhœa, occasionally a slight hæmorrhage from the nose, or a deposition of much sediment in the urine. The crisis is generally preceded by some change in the pulse. Sometimes it runs into typhus, particularly after mal-practice, or bad management, such as copious blood-letting, mercury, &c.

PROGNOSIS.

The termination of this disease depends almost wholly upon the treatment. If the fever runs high, or continues many days without any abatement of the symptoms, the event may be doubtful, and is still more dangerous if there is picking at the bed-clothes, starting of the tendons, and involuntary discharges by stool and urine, with hiccups.

On the other hand, if the heat diminishes, and the other symptoms subside; if there is a free and natural perspiration; if the urine increases and deposits much sediment, and the pulse becomes more slow and soft; if a relax, or diarrhœa ensue, we may with propriety predict a recovery.

DISSECTION.

When dissecting those who have died of inflammatory fever, an effusion has been found within the brain, and occasionally some of the other viscera are affected.

COMMON TREATMENT.

Bleeding copiously from a large orifice till there be fainting or symptoms of fainting; next salts, mercury, antimony, and blisters.

REFORMED PRACTICE.

Indications of Cure.—From the character of inflammatory fever, it is obvious that our first attempt should be to diminish inflammation, and thereby prevent the mischief that may arise from it.

Remedies.—To fulfil this indication, it is necessary to deplete the system, not by blood-letting, which will often bring on typhus, and other serious consequences, but by promoting all the *secretions* and *excretions* of the system. This is the only proper method to reduce inflammation of any kind. The course pursued by physicians of the day, protracts the complaint, injures the constitution, or endangers the life.

Bleeding, so strenuously insisted upon, suddenly or subsequently “prostrates the system into a state of collapse or debility, out of which the most potent stimulants will be hardly sufficient to raise the patient.”

Licautaud, Physician to Louis XV. in his synopsis of medicine, thus remarks on blood-letting in inflammatory fever:

“Repeated bleedings,” as the illustrious Vansweiten remarks, “are apt to bring on more vehement symptoms, or convulsions themselves, as has happened in my own observation, even before the flow of blood was stopped. It is therefore best to avoid them, notwithstanding what some practitioners adduce to the contrary, who are used to accommodate themselves to the whims of the bystanders, and are never deterred by the unhappy event of things, so long as they can keep the confidence of the sick. Here by the bye we may note, that they shamefully mistake, who persuade themselves, that by blood-letting, they answer the end of spontaneous and critical flows of blood, because it has been observed an hundred times, that in every disease, a certain critical hæmorrhage is of more service than frequent blood-letting: besides that a hæmorrhage in this species of fever is for the most part dangerous.”

“I remember,” says Eberle, (a strenuous advocate for blood-letting,) “with pain, the unfortunate lot of an amiable and intelligent friend.—He was a man of a healthy constitution, and fond of indulging in the pleasures of the table. He was seized with simple synochal fever from cold. His physician bled moderately; the fever went on unchecked; he bled again and again daily; after the seventh bleeding there was still too much quickness and tension in the pulse; the lancet was inserted the *eighth* time, and the patient almost immediately sunk into a state of collapse. Stimulants, both external and internal, the most diffusive and potent were now diligently applied, but all in vain; he lived but a few hours longer.

“In Italy,” says the same writer, “the most violent inflammatory fevers are treated, and according to the published reports, with success, by large, and frequent doses of antimony, without any direct depletion whatever.”—By this statement alone, it is evident that this fever can be treated successfully without any bleeding, and even by a very inferior remedy.

I shall now lay down the course of treatment to be pursued in this

variety of fever; and the first medicine to be given, whether there be costiveness or not is

A Purgative.

Take pulverized jalap, (*Rad. Jalapa*,) pulverized.

Alexandria senna, (*sen. Alexand.*)

Cream of Tartar, (*supertart. potassæ*,) equal parts. Mix.

Of this powder, give a common teaspoonful, (about one dram,) in molasses, currant jelly, tea, or any other convenient vehicle every two hours, until free purging is produced. Any warm tea will aid the operation of it. This will lessen the heat, lower the pulse, remove the pain of the head, and other parts. After the effect of this has fully subsided, let

Sudorifics

be administered. The sudorific or sweating-drops may be given every two hours in a tumbler of *catnip* tea, until the patient perspires freely.

In the next place, let the whole

Surface

be well bathed with tepid alkaline wash, (weak ley,) and let it be repeated three or four times within twenty-four hours, or as often as the skin becomes dry and parched. The very first bathing usually removes that biting heat, usually attendant on this fever. It diminishes pain and arterial excitement, and by its stimulating effect on the capillary vessels, promotes perspiration, and in short, has a salutary effect on the whole system.

Further, to equalize the circulation, let the *feet be well bathed* in the above mixture of ley and water; after which, let a sinapism or a poultice be applied to the soles of them, made of indian-meal and mustard, mixed with vinegar. Should there be great pain in the head, let it be bathed in equal parts of spirits, rain-water, and vinegar, to which must be added a small quantity of salt. It will be necessary also to give *diluent drinks or infusions*. An infusion of *catnip* is excellent. Also an infusion of *elder flowers*—cream of tartar water may be occasionally drank. It is refrigerant or cooling, laxative, and acts upon the urinary organs. A writer on this fever has the following remarks:

“Almost every person in a fever complains of great thirst, and calls out for drink, especially of a cooling nature. This at once points out the use of water, and other cooling liquors. What is so likely to abate the heat, attenuate the humours, remove spasms and obstructions, promote perspiration, increase the quantity of urine, and, in short, produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak liquor, of which water is the basis? The necessity of diluting liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as the unquenchable thirst of the patient.

In inflammatory fevers, where the thirst is great, the following forms a grateful and cooling beverage:

Take Cream of Tartar, (*supertart. pot.*) half an ounce.

White sugar, q. s.

Hot water, three pints.

Half a pint or more may be drank as occasion requires.

There is usually great restlessness and wakefulness, and it is therefore necessary to give an anodyne, combined with a diaphoretic medicine. To fulfil this indication, nothing is better than the

Diaphoretic Powders.

They procure refreshing sleep, and at the same time, promote perspiration. Ten grains may be given every night in any suitable vehicle. These medicines must be repeated until the fever terminates, or subsides.

If it is very violent, a purgative may be administered every day, and at farthest, every other day. Sufficient of the sudorific drops must also be administered to keep up a gentle perspiration. Should they prove too stimulating, the *diaphoretic powders* must be given morning and night, as a substitute.

After this course has been pursued two or three days from the accession of the fever, should the pulse continue tense and full, give the

Tinct. of Fox Glove, (Digitalis.)

Fifteen drops may be taken three times a-day, in a tumbler of an infusion or tea made of *balm*, (*melissa officinalis*.) This plant, given in the form of tincture or infusion, possesses the power of *reducing vascular action and lessening general excitement*. It diminishes the irritability of the system, increases the action of the absorbents, and also the discharge of urine.

Ferrier considers *digitalis* a substitute for the lancet in all diseases. "It is well known," says he, "that bleeding is very inadequate to the purpose of lessening the velocity of the circulation, unless it be carried to a dangerous excess. The fox-glove furnishes us with the means of regulating the pulse to our wish, and of supporting a given state of velocity as long as we judge it proper."

REGIMEN.

The patient's diet must be very little and very light. Nutritious liquids should be given, such as indian-meal gruel, panado, toasted bread water. Ripe fruits may be given, roasted apples, currant jelly, &c. but nothing of a heating or stimulating nature should be allowed, except there should be great prostration in the latter stages of the complaint. Wine-sling and wine-whey may then be given. Fresh air must always be admitted to the patient, using due precaution that a current of air be not permitted to reach the patient. It must be broken by curtains or window blinds.

The patient must not be loaded with bed clothes under pretence of sweating him, or preventing him from taking cold; such a practice increases the fever, debilitates the patient, and retards, instead of promoting perspiration. The patient may be allowed, if the strength will

permit, to sit up in bed, or if not able, let his head and shoulders be elevated by means of a chair.

Cleanliness must be regarded. The chamber may be sprinkled with vinegar. The patient's mouth should be often washed with a little wine and water, or equal parts of vinegar and water sweetened with honey. The forehead, temples, and hands may be frequently bathed in vinegar. This is very refreshing and grateful to the patient.

All noise and disturbance should be avoided, and the patient kept as quiet and still as possible. A dozen women should not be suffered to be in the chamber, talking and whispering; it disturbs the mind by creating fears and suspicions. Let there be few attendants in the room. Should there be a great desire for any particular kind of drink or food, it may be given.

Convalescence.—There is great danger of relapse when the patient becomes convalescent; the appetite becomes keen, and the patient is very apt to indulge it, by overloading the stomach; the digestive organs being weak, a relapse is brought on which very often proves fatal; little should be ate at a time, and that ought to be very light and nutritious. If the appetite should not return, an infusion or tea of *chamomile* or *Virginia snake root* may be drank occasionally through the day.

Fresh air, gentle exercise, and the moderate use of good wine will greatly contribute to the recovery of convalescents.

The depletion or evacuation induced by this treatment, will be found quite sufficient. It will generally cure the fever in a few days without any of those injurious effects consequent on the common practice.

CHAPTER IV.

SIMPLE CONTINUED FEVER. (*Synochus.*)

DESCRIPTION.

This fever was formerly known and distinguished by the name of "Long Fever." A combination of inflammatory or synochal, and typhoid or putrid symptoms, constitute simple continued fever. An inflammatory type preponderates in the commencement, and nervous or typhoid, in the latter stages.

CAUSES.

Cold is the most frequent cause of this as well as other types of fever. It may also be occasioned by a morbid condition of the biliary organs, stomach and alimentary canal.

Whatever has a tendency to debilitate the system, may act as a predisposing cause of continued fever.

Hence we find it arises from great exercise or fatigue, violent exertions, intemperance and certain kinds of diet, as well as too great indulgence in sensual pleasures. It may likewise be produced by the suppression of some customary evacuation, certain passions, &c.

But the most prolific cause, is the application of cold to the system, producing a check of perspiration. It would appear that much depends upon the peculiar nature or circumstances of the cold itself, as well as the person to whom it is applied, the degree or intensity of cold, the continuance of it, manner of its application, its being accompanied with moisture, also, a sudden transition from heat to cold. It may be occasioned likewise by breathing vitiated or contaminated effluvia, directly or indirectly from the body of a person labouring under the disease.

The peculiar gas, or excretions proceeding from a diseased person, floats in the air, and being inspired or inhaled, is capable of generating this kind of fever. It is well known that human effluvia, or the effluvia arising from the human body, if concentrated, and is not permitted to mix with the air, and thus become diluted from want of cleanliness and free ventilation, is sufficient to create a fever of great malignity, and when taken into the system, actually creates a specific disease. This is unquestionably the case in typhus. Emanations from animal and vegetable substances, in a state of decomposition or putrefaction, may also cause this fever. Marshy or that kind of soil, the bottom of which is clayey, and which retains for a great length of time, an unusual quantity of water, being acted upon by heat, emits or sends forth noxious effluvia, which proves a prolific source of fever of various types and grades.

SYMPTOMS.

The first symptom of this fever, is a considerable degree of debility, inactivity, heaviness, yawning and stretching, a sensation of cold is now

felt in the back, and over the whole system, which increases till a regular chill over the whole body succeeds. There is nausea or vomiting, little or no taste in the mouth, oppressed and frequent respiration, pulse increased, and there is some confusion of intellect. After a short time, the cold stage which is characterized by these symptoms, decreases, or becomes less violent, and is alternated with flushings, and finally subsides, and is succeeded by a preternatural degree of heat, diffused over the whole system; there is redness of the face; there is a dull, heavy, or throbbing pain in the head; oppression at the chest, and sickness at the stomach; the skin is dry, hot and parched, with some degree of colour, or redness; the pulse is full and frequent, beating perhaps an hundred strokes in a minute; the patient complains of great restlessness; is fretful and manifests some confusion of mind. The tongue, which is at first white, gradually loses this colour, and as the disease advances, it becomes dry, and dark. The urine is usually scanty and high coloured; sometimes pale; there is likewise great thirst and costiveness. If the attack is very severe, there is a great determination of blood to the head, which causes delirium. In this and other kinds of continued fevers, there is usually an increase of all the symptoms towards evening.

These symptoms generally go on about a week without any particular change, except very slight remissions and exacerbations, which take place in the morning and at night. As the disease advances, however, it becomes more seated, unfavourable and dangerous in its character. The inflammatory symptoms in a considerable degree subside, and typhoid symptoms manifest themselves, or great prostration, attended with delirium, lethargy, furred, dark tongue, fetid breath, sordes about the teeth, hurried respiration, starting of the tendons, picking at the bed clothes, &c. The pulse grows weaker and smaller, and the fever proves fatal in two or three weeks.

The typhus stage often commences as early as the fourth or fifth day, and sometimes sooner.

This is the ordinary course of the disease, except when it declines under a favourable crisis, which is usually in about a week.

There is a modification of all these symptoms; sometimes the attack is light, and the fever soon subsides; at other times it is very severe.

The simple continued fever, terminates invariably by a regular crisis, by vomiting, purging or sweating, or by the morbid or febrile matter falling on some organs which excites inflammation, and abscess, or proves fatal.

PROGNOSIS.

Great anxiety, loss of strength, intense heat, stupor, delirium, irregularity in the pulse, twitchings in the fingers and hands, picking at the bed-clothes, startings of the tendons, hiccups, involuntary evacuations by urine and stool, and such symptoms, point out the certain approach of death. On the contrary, when the senses remain clear and distinct, the febrile heat abates, the skin is soft and moist, the pulse becomes moderate and is regular, and the urine deposits flaky crystals, or becomes turbid on cooling, we may then expect a speedy and happy termination of the disease.

DISSECTION.

The appearances of those who die of this fever, are an effusion within the cranium, with some little derangement of the other viscera.

COMMON TREATMENT.

Bleeding in the commencement. Dr. Eberle recommends taking twenty ounces of blood at a time! Salts, mercury, antimony. Armstrong says that mercury must be given to salivate.

REFORMED PRACTICE.

Indications of Cure.—1. Lessen arterial excitement.

2. Restore the secretions and excretions.

3. Equalize the circulation.

4. Remove local congestions.

5. Expel from the system the sources of irritation.

All these indications will be best fulfilled by the means recommended under the head of remittent and inflammatory fevers, particularly the former. In the commencement and first stage, particularly if there be nausea,

Administer an Emetic.

It exerts not only a powerful and salutary influence upon the stomach, and neighbouring organs, but likewise upon the whole system, the skin and other excretory organs, and sometimes brings about a revulsion. After the operation of the emetic, give

The Common Purgative.

These two classes of medicine are indicated from the morbid condition of the stomach, and alimentary canal. The purgative must be occasionally repeated through the course of the disease, either daily, every other day, or once in three days at farthest.

The Surface and Feet

must be frequently bathed with tepid ley water. The repeated ablu-
tion of this liquid, is admirably calculated as before stated, to arrest the febrile course, to moderate excessive heat, and to restore a healthy action of the skin. As often as the skin becomes dry and parched, the surface must be well bathed. It is necessary also to give diaphoretic medicines, in order to keep up a moisture, or a constant determination to the surface. For this purpose, give the

Diaphoretic Powders,

particularly at night. They will lessen pain and restlessness, procure sleep, and diminish arterial excitement; ten grains may be given at night in syrup or currant jelly, to be accompanied with the free use of an infusion of *catnip*.

It will be necessary as in other types of fever to administer

Diluent Drinks,

such as infusions or teas of *balm*, *spearmint*, and *Virginia snake-root*. If the patient is not in great perspiration, cold water, cream of tartar water, and lemonade, may be freely drank.

Acidulated drinks are very refrigerant and refreshing.

Tamarind water may be taken, the juice of oranges and ripe fruits.

Attention must be paid to local congestion, or pains in any particular parts of the system; for such symptoms,

Let Fomentations be Applied.

Hops, *tanzy*, and *wormwood*, may be simmered in equal parts of water and vinegar, enclosed in flannel, and applied to the abdomen, or any other part where there is pain or congestion. Let them be applied very warm, and often changed: for the pain in the head, apply a mustard poultice to the nape of the neck, and to the soles of the feet.

The only method to obviate the subsequent stage of prostration and typhus, is to subdue the inflammatory symptoms in the commencement, which is most easily affected by the treatment here laid down.

The practice pursued of bleeding or reducing the system, to accomplish this, is exceedingly dangerous. It has a manifest tendency, so far to weaken the tone of the system, that there is not sufficient strength left, to combat the succeeding stage, which is invariably one of great debility. Thousands are annually swept off for want of this precaution.

It is of the greatest importance in the latter stages of this complaint, when the system becomes exhausted to keep up the strength of it, by nourishing liquids and diet. Wine may be given pure, or mixed with water, if the stomach will bear it. If it is attended with any putrid symptoms, a wine glass of good yeast may be given four or five times through the day in any manner that can be most conveniently taken.

Should the stomach become irritable and reject purgatives, injections or glysters may be given, composed of

A decoction of Boneset or Thoroughwort, one pint,
Milk, half a pint,
Molasses, one gill,
Sweet oil, half a wine glass. Mix.

Should a cough be present, such medicine must be given as is calculated to allay it.

An infusion of Hoarhound, (*marrubium vulgare*,) and
Slippery elm bark, (*ulmus fulva*,) may be drank freely.

Should a vomiting attend the fever, the *soda powders* may be given.

Lieutaud, first physician to Louis XV., in his Synopsis of Universal Practice, has the following remarks upon this fever:

“Within these limits they are not restrained, whose dull minds have but a smack of the elements of medical science; while they terrify the credulous bystanders, by muttering about the danger of the disorder; and therefore draw blood with a liberal hand, and administer medicines of all kinds, even the more powerful; by which indeed some of their patients are tired out, while others, by the powers of the natural economy alone, overcome the disorder and the untimely remedy. Nor do these

quacks suffer themselves to be disturbed by the unexpected termination of a disease, but rather with a bold face, hesitate not to ascribe the happy event to their own wonderful method of cure."

REGIMEN.

Nothing heating or stimulating should be taken in the first stages of this complaint. The diet should consist of panado, indian-meal gruel, barley and toast water, rice water, stewed apples, prunes or gooseberries, and in the latter stages, light boiled rice, raw egg and wine where there is great debility, oysters or oyster soup.

CHAPTER V.

TYPHUS OR NERVOUS FEVER.

CHARACTER.

THE word *typhus* is derived from a Greek word, which signifies stupor; this being the characteristic symptom of the disease. It is also called *nervous fever*, in consequence of the nervous system being very much affected. There are three species of this fever: One is called *typhus mitior*, being the mildest, and the attack more gradual. The second species is named *typhus gravior*, in consequence of its being more violent in its attack, more malignant, and discovering in its character more putrescency. It is also called *putrid fever*. The third, *typhus icterodes*, or *yellow*, in consequence of bile and yellowishness.

SECTION I.

SLOW, NERVOUS, OR TYPHUS FEVER, (*Typhus Mitior*.)

DESCRIPTION.

The slow or nervous fever, is distinguished from other kinds of fever by its effects on the nervous system. It is a peculiar form of fever which may be spread by contagion, characterized by a torpid state of the *sensorium*, or great lethargy, with great prostration of muscular power, and more or less delirium. It principally attacks those of a weakly constitution; and is generated in jails, hospitals, prison ships, and ill ventilated apartments of the poor, and in damp, dirty cellars, cities and large towns. In a number of persons exposed to the contagion of typhus, some, although rarely, are attacked on the third or fourth day: others on the thirteenth, and some not under three months. But the most common period of an attack after an exposure, is from the end of the first week to the middle of the third.

CAUSES.

Typhus fever may be produced by whatever depresses the spirits, or impoverishes the blood, by certain passions, watching, intense study, the use of poor diet, or unripe fruits of any description. It may likewise be produced by bleeding, mercury, and other minerals; by moist, close, or impure air. Hence it is more prevalent in wet weather, and proves most fatal to those who live in small filthy houses, narrow and dirty streets, hospitals, jails, and manufacturing, or large towns. It generally attacks those who have been frequently bled, and have taken mercury, and those who lead an irregular and licentious life, or whose constitutions have been broken from any cause whatever. It is occasioned from sudden transition from heat to cold; getting the feet or clothes wet; lying upon the damp ground; great fatigue, or bodily exercise. These are all predisposing causes, but the most frequent of all is infection, or contagion communicated through the medium of an impure or heated air, by concentrated noxious effluvia, arising from the body of a person labouring under the disease,* and although it may not be contagious in the commencement, or under proper regulations, yet it may become so from the want of ventilation, treatment, &c. Other fevers, as before intimated, sometimes degenerate into typhus. This fever occurs sometimes in warm climates, but more generally in those that are cold and temperate, often in cold, wet autumns.

SYMPTOMS.

Typhus fever usually commences with a great degree of mildness in all its symptoms. It is usually preceded by slight indisposition for several days, succeeded by rigours or chills, debility, sighing, and oppression in breathing, with nausea and loss of appetite; with a certain unpleasant, uneasy sensation in the pit of the stomach. The countenance is pale and dejected; the eyes are dull and heavy, and there is often tremor of the extremities, sense of weariness both mental and corporeal. Towards evening there is some increase of these symptoms. In the course of a few days, as the disease progresses, there is oppression in the chest, pain in the head, giddiness, confusion of intellect, and great depression of nervous energy. There is sometimes a sinking or fainting, particularly when the patient attempts to sit up; the tongue is dry, at first white, and afterwards coated with a dark brown fur;

* Dr. Hagarth, who devoted considerable attention to the consideration of the contagious nature of typhus fever, and the manner in which it is propagated, has deduced therefrom a variety of important facts, of very great importance for the prevention of misery, and the preservation of human life; whence he concludes that it may be easily and certainly prevented by *ventilation*; (in large, airy, and clean rooms,) or by *separation* (into our hospitals, or into an adjoining room of the same house, where practicable;) or especially by cleanliness, which entirely destroys the poison, wherever it can be completely accomplished.

Wedekind states that during the campaign of the French against Russia, the typhoid contagion, which was generated in the hospitals and houses crowded with prisoners, and which was communicated to the inhabitants along the road by which the soldiers returned, afterwards spread gradually from the road-side to the adjacent districts, until the disease became widely prevalent.

also the teeth are incrustated with the same, yet the patient seldom complains of thirst. There is a small, low, frequent, and irregular pulse; a cold, unnatural, and clammy perspiration breaks out upon the backs of the hands, while the inside of them is hot; the skin is dry and constricted, and all the excretions diminishes; the bowels are usually costive; intellects grow more confused; the patient becomes fretful, restless, and watchful; the countenance more anxious and dejected; urine scanty and high colored, or is pale and watery; sometimes there are catarrhal symptoms, with a short, dry cough; there is pain in the back, loins, and extremities, with a sense of soreness over the whole body; sleep disturbed and unrefreshing; the cerebral functions become more and more disordered; there is more or less deafness; delirium increases; indeed body and mind seem as it were almost paralyzed. The patient has a great aversion to exercise, as well as to conversation.—This stage of excitement generally continues about a week, when it terminates in a stage of prostration, or great debility. The inflammatory symptoms subside, and a great weakness and sinking ensues. The body emaciates rapidly, and if the disease is suffered to progress, it daily assumes more formidable and unfavourable symptoms; there is fluttering; a very weak and intermitting pulse, with startings of the tendons, hiccups, &c. There is also in violent cases some eruptions on the surface, a peculiar hollow sound of the voice, and a swelling and tenderness of the abdomen or bowels. The later stages of fever is also attended with diarrhœa, the discharges being very fetid, watery, and acrid. There is generally, also, so much lethargy that it is with difficulty that the patient can be aroused.

There is one very prominent symptom in this complaint, at which I believe I have not hinted, which is a very unequal circulation. It is common for the temperature of one part of the body to be about natural, while another part is unnatural, if below the temperature of health.—Again, it is very remarkable that in the middle and latter stages of the complaint, also the whole force of the disease, is, as it were, withdrawn from every other part except the nervous system.

This fever frequently continues for some weeks, and terminates in such a state of prostration as to prove fatal, or it degenerates into a malignant type; but when it terminates favourably, it generally subsides about the fourteenth or fifteenth day, by diarrhœa, or by perspiration diffused over the whole body. It often, however, continues thirty or forty days, and finally subsides without any evident crisis.

PROGNOSIS:

Favourable Symptoms.—About the seventh, fourteenth, or twenty-first day, the tongue peeling and becoming moist, showing a conical point and vigour of motion when put out, and quickly retracted, moist skin, gentle diarrhœa, respiration free, pulse becoming slow and full, deafness, sores about the mouth and nose, tumours behind the ears, and a discharge from the same, miliary eruptions unattended by profuse sweats.

Unfavourable.—Profuse evacuations by sweating or purging, much watchfulness, sinking of the pulse, great incoherency of ideas, mutterings, picking at the bed-clothes, considerable dilatation of the pupils of

the eyes, involuntary discharges by urine and stool, starting of the tendons, and hiccups, point out the near approach of death.

DISSECTION.

The usual appearances on dissection are, a softness and flaccidity in the solids, a dissolved state of the fluids, particularly of the blood, collections of sanious matter in the different cavities; turgescence and inflammation of the thoracic, and abdominal viscera, and in the interior parts of the brain, increased vascularity and collections of a serous fluid. In some cases, however, accompanied by great intellectual derangement from the beginning, the minutest dissection, after death, has not been able to detect the least vestige of cerebral disease.

COMMON PRACTICE.

Bleeding, blistering, the administration of mercury, antimony, salts, nitre, &c.

REFORMED PRACTICE.

Indications of Cure.—1. Diminish arterial excitement by stimulating the excretory organs to a healthy action.

2. Equalize the circulation.

3. Remove local congestions.

4. Support the strength of the patient, or the powers of the system.

Emetics.—If called in the incipient stage of this fever, or a few days after the attack, a gentle emetic may be given, particularly if there is nausea, oppression and sickness.

Take Ipecacuan, (*callicoc. ipecac.*)

Emetic plant, (*lobelia inflat.*) equal parts, pulv. Mix.

Of this give a teaspoonful, (one dram) in about a gill of *boneset* or *thoroughwort* tea. Should it not operate in half an hour, the same quantity may be repeated, and an infusion of the *boneset* (*Eupatorium Perfoliatum*) may be freely drank, to aid its operation. Should not the complaint yield to this, and such other medicine as will be mentioned, this emetic may be repeated, once in three days, any time before the stage of prostration commences. One or two doses in the commencement is sufficient, and where there is any peculiar temperament to contra-indicate the use of emetics, and in the middle and latter stages of the fever, they may be entirely dispensed with. The early exhibition of an emetic, is generally attended with a very salutary effect, often arresting the fever in its commencement; but when the fever has existed for some time, they should not be given, particularly when the system is much debilitated. Emetics, judiciously given, not only cleanse the stomach of its acrid and morbid contents, but the impression which they give to the skin, the other excretions, and the whole system, is attended with a very excellent effect. They promote perspiration, and thereby prevent congestion, expel irritating agents from the circulating mass, give tone and energy to the stomach, liver, and the connecting viscera, and in many cases their early use breaks up the disease before it becomes fairly seated or established.

As valuable, however, as they are, it is not always necessary to administer them, in order to remove the disease.

Purgatives.—Gentle cathartics are exceedingly valuable throughout the whole course of typhus fever.

“The full operation of aperients,” says Armstrong, “sometimes reduces the morbid heat of the skin, and the morbid force of the pulse in the stage, almost as effectually as the effusion of cold water, &c.”

In typhus, the brain, and the system generally, is thrown into a very morbid condition, by an accumulation of acrid, and vitiated bile, and matter collected in the stomach and first passages, in consequence of an inactive or torpid state of the liver.

Delirium, great heat and prostration of strength takes place from this cause. The sympathy that exists between these organs is truly surprising: if one is healthy, so is the other: if one is in a morbid condition, those that sympathize with it, are diseased also. Hence the very great importance of exciting a healthy state of the stomach, liver, and whole alimentary canal.

Purgatives are admirably calculated to fulfil this indication. They cleanse and stimulate at the same time, and although a patient is very weak, he will gain strength under the administration of repeated purgatives. They may be given every other day, twice or thrice a week in protracted cases.

Persons in a very low or distressed state of typhus fever, will very soon assume a healthy appearance after the administration of a purgative. The following will be found very effectual and very suitable :

Take tincture of Jalap, an ordinary sized table spoonful.

It may be taken in *mint* tea every three hours, until it operates. In some conditions of the stomach, it operates both as an emetic and purgative, evacuating large quantities of offensive matter, which almost invariably improves the condition of the patient.

Dr. Hamilton makes the following excellent remarks on the use of purgative medicines, in typhus fever :

“More extended experience confirmed these conjectures; and I was gradually encouraged to give purgative medicines during the course of typhus, from the commencement to the termination of the disease. I have directed a strict attention to this practice for a long time, and I am now thoroughly persuaded that the full and regular evacuation of the bowels relieves the oppression of the stomach, clears the loaded and parched tongue, and mitigates the thirst, restlessness, and heat of the surface, and that thus the later and more formidable impression on the nervous system is prevented, recovery more certainly and speedily promoted, and the danger of relapsing into the fever much diminished.

I am disposed to refer the superior utility of purgative medicines in typhus fever, to the circumstance of their operating throughout the whole extent of the intestinal canal; to their acting upon an organ, the healthy functions of which are essential to recovery, in a manner that is consonant to the course of nature, by propelling its contents from above downwards; and to their moving and completely evacuating, the feculent matter which, in this case, becomes feculent, and irritating constipa-

tion, together with the change which fever appears to produce in the fluids secreted into the intestines, seems to be the cause of this alteration in the state of the fæces. The necessity of expelling this noxious mass is therefore apparent; and if my opinion be correct, the operation of a clyster, the stimulus of which is confined to the rectum, must be altogether inadequate to procure the full evacuation which the circumstances of the case require. Accordingly, it is now some years since I have relinquished almost entirely the use of emetics and clysters in fever; I trust to a purgative medicine to ensure a regular alvine evacuation, although the daily exhibition of a purgative is not always required. By this mode of treatment, I avoid the harassing distress which the operation of an emetic occasions, as well as the trouble and fatigue which accompanies the exhibition of clysters. In most instances of fever, this practice by purgatives, is conducted with ease, and a tolerable degree of certainty. The observation and experience of individuals may be necessary, on some occasions, for directing measures where it is not easy to lay down precise rules. The effect of purgative medicines may not be foreseen in every instance, or be altogether immediately under command; at any rate, however, the subsequent doses of purgatives, and the frequency of their repetition, will be regulated by the effect of preceding ones.

It is of importance to consult in all respects the ease and comfort of patients in fever. The exhibition of purgatives, therefore, should be so timed, that their effects may be expected during the day, when proper assistance can be best procured for the sick.

My experience, in the treatment of typhus, enables me to draw the following conclusions :

1st. Purgative medicines are given with safety in typhus, to evacuate the contents of the bowels.

2d. Under this limitation, they may, and ought to be exhibited at any period, from the commencement to the termination of the fever.

3d. The early exhibition of purgatives relieves the first symptoms, prevents the accession of more formidable ones, and thus cuts short the disease.

4th. In the advanced period of typhus gravior, symptoms that indicated the greatest danger, were relieved by the evacuation of the bowels, and the patients in this instance recovered.

5th. Reconvalence from typhus is greatly promoted and confirmed, by a preservation of a regular state of the body. The same means secure against the danger of a relapse."

Diaphoretics.—Among all the class of medicines prescribed for this disease, none stand higher than sudorifics, or medicines which produce perspiration. They are calculated to relieve the stupor and pain, they expel the morbid matter from the system, allay heat and procure rest. The *sweating drops* may be given as directed under the head of bilious remittent; these may be given particularly in the first stage of the disease, in doses of a teaspoonful in a small quantity of *catnip* tea, sufficient to produce a moderate degree of perspiration. Too much sweating must not be promoted or encouraged, as debility is apt to follow. A moisture of the skin must be produced, at least, throughout the

whole course of the disease until a crisis takes place ; give an infusion of *balm* and *catnip*. Should the *sweating drops* prove too stimulating they must be omitted, and such diaphoretics as have the desired effect, without increasing the heat of the body. For this purpose give an infusion or tea of the *amaranthus*, or *crawley root*. The medicinal herbs just mentioned have this tendency. Sometimes the capillary vessels are so much constricted, and especially in the middle and latter stages of the disease, especially where they have been neglected, that it is very difficult to promote perspiration ; but where the surface has been properly and timely attended to, with other suitable medicines, this is seldom the case.

Refrigerants, or cooling Medicines.—After the disease has become fairly established, and assumes an obstinate character, I have known every prescription of a heating or stimulating nature to aggravate the complaint. In this case, it becomes necessary to reverse the treatment. Refrigerant and cooling remedies must be used. The following purgative will be found best.

Take Alexandria senna,

Manna, of each one ounce.

Add boiling water, and simmer to half a pint. Strain, add a teaspoonful of cream of tartar, sweeten with sugar or molasses.

Give one half, and if it does not operate in three hours, give the remainder. This purgative may be occasionally repeated.

Diluents.—Cold water may be drank from time to time, if the patient complains of great thirst. Also lemonade, cream of tartar, whey, and soda powders. Likewise beer made of various roots may be freely drank ; such as *spice-wood*, *sassafras*, *burdock*, and *black alder*. Let them all be boiled down strong, sweetened with honey or molasses, and when blood warm, a sufficient quantity of yeast added. This will prove a grateful and cooling beverage, and it may be drank freely.

Anodynes.—If the patient is unable to sleep, complains of pain or distress, ten grains of the *diaphoretic powders* may be given at bed time in any suitable vehicle. This produces sleep, moisture of the skin without causing any excitement, and is a most invaluable medicine in typhus. These powders may be repeated daily.

Cold affusion.—Among the various means made use of to arrest the progress of this disease, few are more valuable than the cold affusion. Such confidence had Dr. Currie, of Liverpool, in this application in fevers, “that,” he says, “for the cure of our most common febrile diseases, it is no longer necessary to ransack the elaboratory of the chemist, or to traverse the mountains of Peru; that, used in the three first days of fever, the cold affusion very generally stops the disease. The same happy effects sometimes follow its use on the fourth, or even fifth day, but seldom later. Even in the subsequent stages, where the heat continues preternaturally great, and the skin dry, it is of great and manifest advantage, almost immediately relieving the most distressing symptoms, particularly restlessness and delirium, and conducting the disease to a safe and speedier issue.”

If the heat is not much above the natural temperature, as is sometimes the case in typhus, tepid or moderately warm applications may be

applied to the body, the whole surface may be bathed with it three or four times a day, or as often as the fever increases; this answers all the purposes in general of dashing buckets of water upon the patient. Should the heat be below the natural standard, let the parts occasionally be bathed with cayenne pepper and spirits. It is of the utmost importance to bathe the feet in warm rain water or ley, once a-day. Great attention must be paid to cleanliness, the patient's hands, face, and breast, should often be washed with warm water, his hair should be combed, and his bed and body linen frequently shifted, his mouth and fauces are to be washed and gargled with lemon juice and sugar; lemonade, tea, or toast and water should be given very frequently; all excrementitious matters should be immediately removed, and the apartment should be well ventilated.

SINKING STAGES OF TYPHUS.

We have hitherto been speaking of the first stage of typhus, before collapse or great prostration or sinking takes place. It is well known that *debility* is a characteristic symptom of this fever, and hence it is necessary to use the utmost precaution to support the strength of the system. To effect which we must give, first,

Tonics or Stimulants.

Even though the pulse be somewhat irregular, weak, or quick, it will not contra-indicate or deter us from the use of corroborating or strengthening medicines, especially where prostration of strength is very great, and the person sinking. If the skin be dry and there is great debility, the best Madeira wine may be given, diluted with twice its quantity of water, sweetened and given warm. This acts not only as a tonic, but likewise as a diaphoretic, promoting perspiration. A wine glass full may be occasionally given through the day.

Good Porter may be given.

The infusion of *serpentaria Virginiana* and *boneset* may be given with advantage. If these medicines improve the state of the patient, let them be continued and the doses increased as the stomach will bear, until there is a crisis or a remission. Should they increase the symptoms, they must be given in smaller quantities or discontinued altogether.

Sometimes ripe fruits, (says a writer) particularly strawberries and wine, are the only nourishment he will take; which circumstance of itself forms a presumption, that they are the properest for him. At other times, when he refuses panado, sago, rice, when prepared without wine, he will take them in considerable quantity mixed with wine and sugar; and when he takes such nourishment with any degree of relish, they seldom fail of being beneficial. They enable him to bear the open air and a free ventilation for a longer time, which always tends to hasten his recovery.

When that prostration of strength, so often mentioned, has taken place, and is followed by stupor, low delirium, twitching of the tendons, and other symptoms; however proper we may think the bark would be, and however eager we are to give it, this is no longer in our power. In

this state the patient generally rejects it in all its forms, or will only take it in such small quantity as can be of no service. Yet the case is not entirely hopeless; for even in this situation, if the lips are moistened with a little warm wine, sweetened with sugar, he will shew a relish for it, and when given in spoonfuls, will suck it into his mouth, with signs of satisfaction, after rejecting every medicine with disgust, and refusing every other kind of nourishment whatever.

In one particular case of this nature, which I well remember, after a certain quantity of wine (perhaps near a pint) had been given in the space of an hour, I perceived the patient's pulse acquire strength, and become slower, while the insensibility seemed to wear gradually away; but the relations taking an alarm at this quantity of wine, notwithstanding those flattering appearances, withheld it, and offered the patient some other drink, which in their opinion was more suitable to his case. Notwithstanding his again and again rejecting every thing they offered, it was not till after they plainly perceived the pulse begin to sink, and the delirium to return, that they could be prevailed on to give more wine, which, upon my returning to visit the patient, I persuaded them to do, and with the same success as before.

I have known instances also, where the physician not being convinced that the filling of the pulse and removal of delirium was owing to the wine, has set aside the use of it in the same manner, till the return of the bad symptoms obliged him to resume it, not without remorse for having made an experiment which had like to have proved fatal to the patient.

It is generally necessary, in such cases, to begin by giving the wine warm with sugar, to induce the patient to take three or four spoonfuls; but afterwards he takes it freely cold, and without sugar.

The reader might be astonished were I to mention the quantity of wine I have known some patients take in this fever, and in some cases of the confluent small-pox, where the weakness, insensibility and other symptoms, were the same, and where the recovery of the patient was evidently owing to that cordial alone. The proper rule is to give the wine till the pulse fills, the delirium abates, and a greater degree of warmth returns to the extremities.—Upon the smallest appearance of the stupor coming back, the pulse quickening and sinking, for they all go together, the wine must be resumed.

Attentively observing this rule, I have often known patients, who in health were not fond of wine, and who would have been intoxicated with a single bottle, drink in the space of twenty-four hours two bottles of claret without any other effect but that of strengthening the pulse, abating the delirium, removing the tremor, and creating a moderate warmth on the skin. In others I have known a much greater quantity necessary to produce the same effect; but by giving that greater quantity, the same effect was produced. As I am told that this part of my work (and perhaps many others) will be exposed to censure, I refrain from mentioning the exact quantity of wine which I have known some particular patients take, with the best effects, in this fever—it is sufficient to say, that it ought to be given in such quantity as the patient will willingly take, till the effects above mentioned are produced, and then stop; but on the first appearance of the pulse becoming weaker,

or any other symptoms returning, more wine must be given, persevering in that quantity which is found by attentive observation sufficient to keep up the pulse, and ward off the other bad symptoms.

When that quantity has been continued for several days, it may be gradually diminished; a little bread soaked in the wine, or some other simple nourishment, may be offered. After the patient is able to take panado mixed with wine, or bread soaked in it, with any degree of relish, the appetite sometimes becomes very keen, and he is even willing to take more panado, rice, or sago mixed with wine, than is proper for him.

This return of appetite is undoubtedly one of the strongest indications of returning health; but it must be indulged with caution; the patient must be allowed to eat but little at a time, even of this kind of nourishment, and to return very gradually to his usual food.

Soon after the fever is entirely removed, and long before the patient has recovered his strength, he will, by proper management, be entirely weaned from the wine, or his allowance may be reduced to two or three glasses in a day, if the physician should think that quantity more proper than none. Indeed, the third part of what formerly had proved a salutary cordial and a restorative, would, in this state of convalescence, occasion a dangerous intoxication. So great a difference is there in the effect of this cordial upon the constitution, in this state of extreme weakness, when all the natural functions seem loaded and clogged by disease, from what it has in perfect health, or when the fever being just removed, the animal functions gradually resume their former course.

Claret is the wine I have generally recommended, when the circumstances of the patient could afford it. I have seen the same good effects, however, from the use of Port, Maderia, and other wines; and when no kind of wine is to be had, brandy or rum diluted with water or milk, and sweetened with sugar, must be substituted in its place. In the state of stupor, debility and low delirium, already described, spirits diluted have nearly the same effect with wine, and are even more relished by a certain class of patients.

Where wine cannot be procured, equally beneficial effects have been produced by drinking sound porter or ale with a lemon or orange sliced into it, and rendered agreeable to the palate of the patient by the addition of moist sugar. This beverage may be drunk occasionally, will be found to support strength as effectually as wine, and is in general much relished by the sick; with the addition of one dram of muriatic acid to each quart of the liquor, it forms a remedy to which the cure of most of the low fevers of this country may with safety be confided.

Rubefacients.—I have very little confidence in blisters, although some highly extol them. Applied in the first stages of the disease, they have a tendency to increase it, and there is also danger from mortification. A mustard plaster is not attended with these unpleasant effects.

If there is a great determination of blood to the head, one may be applied to the nape of the neck, and kept on long enough to excite redness of the skin. It may then be removed, and placed on the right side over the region of the liver, and continued until the same effect is produced.

If the head is in great pain, cold water, spirits, and vinegar, to which has been added a little common salt, may be applied to it.

When we reflect upon this stage of prostration, is it not a matter of profound astonishment that many of the physicians of this day, should practice blood-letting, even when the patient is on the borders of the grave from debility. I ask the candid, sensible reader, whether there is any sense, judgment, or philosophy in such treatment?

As before mentioned, it is very common in typhus for the temperature of one part of the body to be natural, while in another, there is an unnatural degree of heat. This arises from a recession of blood from the surface to the internal organs, or to an unequal circulation of the blood. To obviate this, fomentations and frictions must be applied. Hops boiled in vinegar may be applied. Also, the following:

Cayenne Pepper, (*capsicum annum*) a teaspoonful.

Spirits of any kind, half a pint.

Simmer a few minutes, and apply to the parts with a piece of flannel.

These applications have a tendency to recall the blood from the internal parts to the surface, and to equalize the circulation.

If great weakness continues, and the system cannot be aroused by the stimulants already mentioned, the following powder may be given:

Cayenne Pepper, (*capsicum annum*) 10 grains.

Mint water or tea, one gill.

Sweeten with sugar or lemon syrup.

Give the whole at a dose and repeat three times a day.

This is one of the most permanent and pure stimulants that can be administered, and has this peculiar effect upon the system, that while it stimulates, it does not increase the fever.

Should a diarrhoea come on, and the general symptoms indicate a favourable crisis, it must not be checked; but on the contrary, should the patient continue to grow worse under it, it must be checked or moderated. For this purpose give the following mixture:

Take best Turkey rhubarb, 10 grains.

Sal Eris, 5 grains. Mix.

And add the same to one gill of an infusion or tea of *peppermint*, and let the whole be taken, to be repeated every three hours, until the diarrhoea is checked.

Tonics.—Many are in the habit of giving *Peruvian bark* in typhus fever, but I have no evidence of its ever proving beneficial. While the exciting cause of the disease remains, it seems to possess no power of removing, but rather increases it. Should, however, a complete remission take place, *centaury*, or *boneset* and *chamomile* tea may be drank.

Should any symptoms of putrescency appear, the following mixture may be given:

Good yeast, a wine-glass.

Olive oil, one table spoonful. Mix, and sweeten with molasses.

Let the whole be taken at a dose, and repeated two or three times a day.

Fresh Air.—In this, as well as every other type of fever, fresh air must be admitted into the apartment of the patient, and the most rigid attention to cleanliness must be observed. As soon as any thing passes the bowels, it must be immediately removed, and the casements of the windows or the doors left so far open as to admit a current of air.

REGIMEN.

The patient must be kept cool and quiet in body and mind, and as much encouragement held out as the nature of the fever will admit.—After the stage of excitement is over, a nourishing and generous diet may be allowed, such as panado and gruel mixed with wine. Chicken soup may be given, particularly in the middle and latter stages of typhus, but it must be freed from oil. Wine whey may also be given as a common drink, and as before intimated, occasionally a glass of good Madeira wine may be given, and if there is no fever, with great weakness, wine bitters.

The following cases were communicated by Dr. Wolcott :

Case I.—A farmer aged twenty-two, of a thin spare habit, but constitution naturally good, applied to me for advice sometime in the month of July last. He had laboured hard, and I found on critical investigation that he had been addicted to the solitary vice of onanism. He told me that during the space of two years, he had experienced a total want of virile energy.

Symptoms.—Pulse somewhat accelerated, bounding a little on exacerbations of fever, but yielding readily to pressure; tongue coated with a yellowish fur; want of appetite, with languor and slight aberration of mind. As his disorder advanced, he became stupid; pupil of the eye dilated; brown tongue; dark brownish matter adhering closely to the teeth near the gums, and the pulse, when the fever was going off, promptly indicated a sinking state of the system.

Treatment.—In the commencement, an emetic of *ipécac* followed by a brisk purgative of *jalap* was administered. From the great debility which he experienced in the first stage of his complaint, and being well persuaded that he would go through a course of fever of uncertain duration, and having read of a case of slow fever, followed by the death of the patient, in consequence of onanism, recorded in one of our periodicals by a celebrated practitioner of this (Connecticut) state, I considered my patient's case a very critical one, and therefore communicated to the friends of the sick, my wish to have consultation. Dr. Fitch of North Guilford was then called in, to whom I mentioned the particulars of the case, and we accordingly agreed upon the plan of treatment. As the exacerbations of fever were of short duration, and as his system exhibited a constant disposition to sink, we directed the attendants to feel the pulse in his wrist, and whenever they should find it weak and feeble, to raise it by gentle stimulants. This was the guide. A bolus was first prescribed, composed of about fifty grains of the carbonate of ammonia triturated with four table spoonsful of pure honey, of which a teaspoonful was given every three hours, and an infusion of *Virginia snake-root*, three drams to the pint of boiling water, a ta-

ble spoonful every three hours, half an hour after the exhibition of the common and previous to the febrile accession. To obviate subsultus, (starting of the tendons,) and quiet the low muttering delirium, we gave a teaspoonful of strong *Valerian* tea once in four hours, but this, after taking three or four times, he refused. To avoid putrescency, check the fever, and give tone to the system, he took elixir of vitriol, seven drops in a table spoonful of cold water, every fourth hour, fever on or off. When febrile exacerbations ran high, cream of tartar, a teaspoonful dissolved in a pint of hot water, was directed to be drank freely. This solution acts as a mild diuretic and refrigerant, and sometimes slowly opens the bowels. We gave him liberty to drink freely of cold water, vinegar and water, lemonade, *mountain mint* or *balm* tea, as he might select. One daily evacuation from the bowels was solicited, but diarrhœa was dreaded from the beginning, and consequently whenever the patient had more than one or two stools within the space of twenty-four hours, a quarter of a grain of opium was ordered once in six hours to check or restrain them. To counteract the stupour, a blister was applied alternately to the arm and leg of opposite sides, and kept on just long enough to excite a little redness, or inflammation.

The exacerbations of fever being now very short, and when off, the pulse suddenly sinking, wine, that best of stimulants in typhus, was next resorted to. A table spoonful of the best Port or Maderia, diluted in twice its quantity of cold water, was ordered to be administered, and repeated according to circumstances.

When he became tired of wine, we gave him old St. Croix Rum, one teaspoonful to two of cold water, sweetened with loaf sugar, and repeated as occasion required, to raise the pulse.

One evening I was present when the pulse sank to an alarming degree. The patient could not speak, and when I offered him wine, he turned his head away in disgust, and seemed determined to take nothing more. I now felt deeply concerned, as I was convinced that dissolution would speedily follow, unless some powerful stimulant could be conveyed into the system. Said I, applying my mouth close to his ear, "— you will certainly die, and that immediately too, unless you take this medicine." He then opened his mouth, and I gave him half a gill of strong camphorated spirit, which immediately roused him, and from that moment he began to recover.

His diet consisted of milk-porridge; equal parts of wheat flour and ground rice boiled in milk, custards, chicken broth, soft-boiled eggs, fowls, broiled ham, &c.

Under this treatment he rapidly convalesced, and when I saw him a short time since, he told me that his virile energies were restored: he enjoyed excellent health and spirits, and was much more fleshy than before his indisposition.

Case II.—Some years since, a lady aged twenty-four, was seized by a continued fever. I cannot give all the particulars of the case, as I was then but a child, but I well recollect that the heat of the patient's body was steadily above natural; skin hot, dry, and red; tongue rough and parched, and thirst very great, the patient almost continually calling out for cold water.

Dr. Joseph Foot, of North Haven, Connecticut, the attending physician, recommended affusing the body of the patient with cold water at the height of the exacerbation. He also expressed his opinion that should the fever continue to run high after the application of the water, it might be necessary to repeat it. Accordingly about nine in the evening, the patient, divested of all her clothing, was placed in a large tub, and one or two buckets full of cold water dashed upon her head. The patient was very much refreshed by this process, which disengaged such an evaporation from the skin, that the body smoked like stones or bricks dashed with cold water.

After this, the pulse rose, the temperature of the body increased, flushes of heat appeared on the face, which continuing, the friends of the patient, contrary to *precise* directions from the physicians, again applied the cold water in the same manner as before. This procedure struck in the fever and distressed the patient exceedingly.

At this critical juncture, the physician happily arrived, and advised me to go immediately into New Haven, (a distance of seven miles,) and procure some of the best Maderia wine, and a box of soda powders. This I accomplished in a very short time, and obtained the articles. Wine was immediately administered; and repeated agreeable to prescription, which brought the heat to the surface of the body, and to cool the system, and calm the irritation in the stomach, one or two of the soda powders was given according to directions. By this treatment the fever was arrested, and no further unfavourable symptoms occurred except slight flushes of heat, which appeared occasionally on the cheeks, but their duration was very short. The patient recovered.

I must not omit to mention that in the above case the cold affusion was employed in the incipient stage of the fever; and here I beg leave before I close, to suggest a hint both to physicians and the friends of the sick, viz. that affusing the body of a patient with cold water should never be employed except in the presence of the medical attendant, or a person well acquainted with the nature and effects of the cold affusion.

SECTION II.

PUTRID OR MALIGNANT FEVER. (*Typhus Gravior*)

DESCRIPTION.

Malignant or putrid fever takes its name from the putrescent and malignant character with which it is attended, especially in the latter stages of it. It is by some called the *pestilential fever of Europe*, and seems nearly allied to the plague. It may be distinguished from the mild species of typhus, by the great violence of the attack, and from the inflammatory fever, by the smallness of the pulse, the sudden and great debility in its commencement; the brown or black tongue; the foul matter about the teeth; the intense heat of the skin; and in the advanced stages, purple spots, which appear in various parts of the body; fetid stools, &c.

CAUSES.

The malignant fever is occasioned by impure air, from many persons being crowded together into small, dirty, and unventilated apartments or houses; from putrid animal and vegetable effluvia, &c.

Like common typhus, it is prevalent in jails, camps, and hospitals, particularly where they are much crowded, filthy, and the air confined. Long periods of rainy or wet weather, it is thought, likewise occasion putrid fever. It often succeeds great inundations in low and marshy countries, particularly where these are preceded and followed by a hot and sultry season. It may likewise arise from eating too much animal food without the use of vegetable, or eating meat that is on the verge of putrefaction. Hence those from the calamities of war; those who are confined on ship-board, and are obliged to live upon unwholesome, tainted animal food, are very liable to an attack of putrid fever.

It may also arise from stagnant water, also the effluvia arising from the decomposition of animal matter, dead bodies, &c. Hence it has often prevailed where persons have been suffered to remain above ground, unburied.

Want of cleanliness is a common cause of malignant fever, and it prevails where the inhabitants are crowded together, the apartments filthy, and a very little circulation of air. This fever is unquestionably contagious.

.SYMPTOMS.

An attack of this disease is characterized by debility, great depression of spirits, and of muscular power. There is sense of soreness, pain in the head, back, and extremities, attended with chills; the eyes appear full, heavy, yellowish, and somewhat inflamed; there is a great beating of the temporal arteries, the tongue is dry and parched, breathing laborious and interrupted with deep sighs, the breath is hot and offensive, urine pale, an intense heat of the skin which is dry and constricted, great constipation of the bowels, the pulse is quick, small, and hard, fluttering and irregular; there is often great heat, oppression, and pain at the pit of the stomach, and as the disease advances, the pulse increases in frequency (beating often from 100 to 130 in a minute): there is apparently vast debility; great heat and dryness of the skin; oppression at the breast, with anxiety, sighing, and moaning; the thirst is greatly increased; the tongue, mouth, lips, and teeth, are covered over with a brown or black tenacious fur; the speech is inarticulate, and scarcely intelligible; the patient mutters much, and delirium arises. The fever continuing to increase still more in violence, symptoms of putrefaction show themselves; the breath becomes highly offensive; the urine deposits a black and fetid sediment; the stools are dark, disagreeable, and pass off insensibly; hæmorrhages issue from the gums, nostrils, mouth, and other parts of the body; livid spots, or petechiæ, appear on its surface; the pulse intermits and sinks; the extremities grow cold; hiccups ensue; and death at last closes the tragic scene.

When this fever does not terminate fatally, it generally begins, in cold climates, to diminish about the commencement of the third week, and

goes off gradually towards the end of the fourth, without any very evident crisis; but in warm climates it seldom continues above a week or ten days, if so long.

PROGNOSIS.

Our opinion, as to the event, is to be formed by the degree of violence in the symptoms, particularly after the appearance of petechiæ, although, in some instances, recoveries have been effected under the most unpromising appearances. An abatement of febrile heat and thirst, the tongue becoming moist and clean, a gentle moisture diffused equally over the whole surface of the body, loose stools, turbid urine, the pulse being stronger, but less frequent, a free secretion of saliva, tumour and suppuration of the parotid, axillary, or inguinal glands, a scabby eruption about the mouth, and the delirium and stupor abating, or going off, may be regarded in a favourable light. On the contrary, great muscular debility, very laborious respiration, difficulty of deglutition, stupidity, and listlessness of the eyes, perpetual writhing of the body, petechiæ of a livid colour, with dark, offensive, and involuntary discharges by urine and stool, fetid and cadaverous sweats, hæmorrhages, subsultus tendinum, and hiccups, denote the almost certain dissolution of the patient.

The duration of putrid fever is very uncertain; it sometimes runs its course in a week, at other times it continues several weeks.

Favourable Symptoms.—Rising of the pulse, return of sleep and reason, the spots being of a florid colour, natural perspiration, moist and clean tongue, eruptions about the mouth.

Unfavourable Symptoms.—Partial clammy sweats; weaker and irregular or tremulous pulse; dry, black, or choppy tongue; swelling of the abdomen, involuntary discharge by urine and stool, starting of the tendons, picking at the bed clothes, high delirium, constant vomitings, coldness of the feet and hands, trembling of the tongue, laboured respiration, difficulty of swallowing, all denote a fatal termination of the disease.

COMMON TREATMENT.

Among the various means recommended, is bleeding, mercury and blistering.

When during the German war, the French were shut up in Prague by the Austrians, they suffered by a putrid fever, for which their physicians bled them freely. The consequence was such as we may readily imagine, for they lost from eighty to one hundred every day.

REFORMED PRACTICE.

The great indication of cure in putrid fever, is to arrest it as speedily as possible, in order to prevent the fluids from running into a state of putrefaction.

An *emetic* may be administered, as directed in the preceding type of fever, and if it prove beneficial, it may be repeated in a day or two afterwards.

Give the following purgative :

Take pulverized Jalap,

do. Senna,

Cream of Tartar, equal parts.

A teaspoonful may be taken in syrup, molasses, or any convenient vehicle, every two hours, until the bowels are thoroughly evacuated; to be repeated daily, or every other day, according to circumstances.

Give a teaspoonful of the *sudorific* or *sweating drops* in a tumbler of *catnip* tea, to be repeated every two hours until perspiration takes place. These drops must be used often enough to keep the skin moist, and two or three times a day is sufficient for this purpose. Let an infusion or tea of the same plant be freely taken at the same time. No means that can be made use of, will cut short the fever so quick as free perspiration.

Let acidulated drinks also be given. Lemonade is a valuable medicine in putrid fever. It is antiseptic, or has a great tendency to prevent putrefaction.

Dr. Thomas who had much experience in this kind of fever, has the following remarks on the use of acids:

“Whatever is given to the patient for drink ought to be cold, and gently acidulated with the juice of oranges or lemons. The mineral acids likewise are, beyond all doubt, better remedies in this and other malignant diseases, than we have been accustomed to regard them; and from having employed them, but more particularly the muriatic, for several years with very great success in typhus gravior, I can vouch for their efficacy. My usual plan of proceeding is as follows:—Having relieved the stomach by a gentle emetic where nausea prevails, cleared the bowels of their feculent contents, and subjected the patient to cold affusion, when the circumstances already noticed have admitted of it, I prescribe for adults ten or twelve drops of the muriatic acid, guarded with five drops of laudanum; and as a vehicle I employ about an ounce and a half of an infusion of cascarilla, columbo, or orange peel. This draught I direct to be repeated every four hours, gradually increasing the quantity of the acid in each to eighteen or twenty drops, or more.

The surface.—In order to aid the process of sweating, and consequently to abate the febrile symptoms, let the whole surface be *thoroughly and repeatedly bathed with tepid ley-water*. The happy and permanent effects of this practice, the astonishing power that it possesses to arrest and destroy fevers of every grade, can only be known by those who have experienced it. It seems almost capable at once of snatching the victim from the grave. It lowers the pulse; diminishes arterial excitement; removes pain, tension, and congestion; equalizes the circulation; quenches thirst; procures rest and sleep, and in short is one of the greatest anti-febrile remedies which we possess.

The feet also must be bathed once or twice a day, and mustard poultices applied, and to the nape of the neck if there be great pain in the head. By reference to Thomas, I see that he highly extols, with others, cold affusions in putrid and malignant fever, which I shall here sub-

join. At the same time, as far as my experience goes, I have found that tepid applications are preferable to cold, in all febrile diseases.

Dr. Thomas thus remarks:

“These steps being pursued, and the nature of the disease clearly ascertained, I would advise the ablution of the patient with cold water, or rather a general affusion, provided the heat of the body is steadily above the temperature of health. The good effects of this mode of practice I have often experienced.

The late Dr. Currie, of Liverpool, reports, that this fever having made its appearance in a regiment quartered in that town, he had the men drawn up and examined, seventeen of whom were found with symptoms of it upon them: these he subjected to the cold affusion once, or sometimes twice a day. In fifteen of this number the contagion was extinguished, and in the remaining two, the fever went through its course. The healthy part of the regiment bathed in the sea daily, and by these means he effectually destroyed the contagion. He also relates, that of thirty-two who went through the disease, by its being too confirmed to be removed at the time of his first seeing them, only two died; and with these the cold affusion was not had recourse to.

This gentleman's report, with the authorities of other practitioners of eminence, clearly prove the application of cold water by affusion on the first attack of the complaint to be, under certain restrictions, an efficacious remedy for stopping its progress, as likewise that of other low contagious fevers.

Dr. Currie found that the most advantageous time for using the cold affusion is when the exacerbation is at its height, or immediately after it is begun, which is generally from six to nine in the evening; but he observes it may be used with safety at any time of the day, when there is no great sense of chilliness present; when the heat of the surface is steadily above that which is natural; and when there is no general or profuse perspiration.

The same remedy has likewise been successfully employed by him, and many others, in the more advanced stage of the fever, so as seldom to fail of procuring a safe termination. He relates a case of a soldier who was in the ninth day of the disease when he first saw him: his pulse was 100, and feeble; his heat was 104; his thirst very great; his tongue foul and black; his mind much confused, and at times he was delirious; and petechiæ were dispersed over his whole body. The mode of treatment was as follows: his strength was directed to be supported by administering a bottle of wine a day, with an equal quantity of gruel; every night he took an opiate draught, and his body was kept open by laxative clysters, and when these failed, by physic. A bucket full of salt water was directed to be thrown over him immediately, which was to be repeated according to circumstances.

The effect was, that in a few minutes after the affusion, the heat lessened to 98; the pulse moderated to 96; and his mind became more calm and collected. Two hours afterwards he had relapsed nearly into his former state, but the night was passed with greater tranquility. The whole of this practice was continued with nearly the same result, until the twelfth day of the disease, the affusion having been performed in

the evening, and occasionally at noon. The fever continued its usual period; but on the twelfth day, the heat having sunk to its natural standard, the cold affusion was thenceforth omitted, and instead of it, the body was sponged all over once or twice a day with vinegar.

In those cases where the fever had been of eleven, twelve, or thirteen days' standing, and the heat of the body was inconsiderable, he thought it prudent to make the degree of cold very moderate, and in some instances he substituted tepid ablution, or sponged the body over with vinegar by itself or diluted with water.

Some communications to Dr. Currie from Mr. Marshall, surgeon of the Cheshire regiment, bear further testimony to the good effects of this remedy in typhus fever. In sixty cases out of sixty-four, in which it was employed at an early period, the disease was arrested by having recourse to it three or four times; and in the other four which were advanced in their progress, although the disease was not stopped from going through its natural course, still all the patients recovered. Mr. Marshall mentions, that from the time he began the cold affusion, he used little or no wine, no opium, nor indeed scarcely any other remedy in any one case in which the cold affusion was employed; which report is of itself sufficient to establish its decided superiority over every other mode of treatment.

It is, however, in the early stages of low contagious fevers that we can employ it with most advantage. It has, indeed, been used by many practitioners, in some instances, so late as the twelfth, or even the fourteenth day, with safety and success; but it can only be employed at this advanced period, in the instances in which the heat keeps up steadily above the natural standard, and the respiration continues free. In such cases it has been observed to appease agitation and restlessness, dissipate delirium, and, as it were, snatch the patient from impending dissolution. When the remedy is to be had recourse to, every arrangement should be made for the affusion before the patient is moved at all; and fatigue as well as disquiet should be avoided as much as possible. In those cases where the delicacy of the system, or the apprehensions of the patient, or of the by-standers, may prevent cold affusion from being employed, we may substitute tepid affusion for the more powerful remedy, or we may recommend either ablution or aspersion.

A memorable instance of the good effects of cold affusion came under my immediate knowledge some years ago, whilst I practised in the West Indies. A professional gentleman of my acquaintance, residing in the island of Nevis, was attacked with this fever, and it proceeded with such violence, that in a few days petechiæ appeared on different parts of his body, and a hæmorrhage of blood issued from his nostrils, mouth, and other places. Under these unfavourable circumstances he was freely exposed to the open air, and one or two buckets of cold water were thrown over him; he was then wiped perfectly dry, and replaced in his bed; which plan of proceeding was repeated twice and sometimes thrice a day. By means of this application, the administration of an opiate at night, and a liberal allowance of wine, his life was preserved, to the great but pleasing astonishment of all his friends.

I have been much in the habit of recommending cold affusion, or

ablution, in most cases of typhus fever, and with very beneficial effects. The same practice has been adopted in the London House of Recovery, and apparently with the most decided success. Obvious, however, as are the advantages to be derived from the remedy in question, still there are many practitioners who look on it as an innovation, and are therefore averse to it.

In the early stage of typhus, the superior efficacy of affusion over ablution, is unquestionable; its operation extends beyond the mere abstraction of heat from the surface: it acts powerfully on the nervous system. Besides its effectually removing the uneasy sensation of heat in the beginning of febrile diseases, and thus indirectly recruiting the animal powers, it induces sleep. We well know that when any disagreeable sensation is removed, sleep soon follows, and it happens so in this instance. After the fourth or fifth day of fever, the influence of both affusion and ablution is greatly diminished, and not sufficient to interrupt the morbid actions; at a still more advanced stage the heat is removed nearly in the same degree by washing the surface of the body with a wetted sponge, or cloths dipped in water, as by pouring cold water on the naked body; and the patient is relieved nearly the same by one mode of treatment as by the other. Thus much for the comparative merits of affusion and ablution.

In the advanced stages of typhus gravior, as well as of typhus mitior, where either the affusion of water of a low temperature, the immersion of the patient, or even the sprinkling his body with cold water, might in the least endanger our arresting the movements of life, we should always take the precaution of giving a glass of warm wine, or some other powerful cordial, immediately after employing the remedy.

Antiseptics.—When symptoms of putrescency occur, let good yeast be given freely. Brewers' yeast is preferable, if it can be procured. A wine glass may be given every three hours through the day, and once, during that period, let an ounce of olive or sweet oil be added to a wine glass of the yeast, sweetened and drank. Besides the laxative effects of the oil, it possesses great antiseptic properties. A clergyman and practitioner in England records the good effects as follows. It would appear to possess almost specific properties.

Whatever may be the mode of action of yeast in typhus, the fact appears to be indisputable, that fixed air takes off that extreme debility of the stomach so conspicuously marked in disorders of this nature; and in proportion as that subsides, the pulse rises, becomes slower and fuller, the burning heat on the skin disappears, and a truce is gained for the reception of nutritive supplies.

"Seventeen years past, I went," says a benevolent individual, "to reside at Brampton, near Chesterfield. I had not been there many months before a putrid fever broke out among us: finding a great number of the people too poor to afford relief to themselves, I undertook, by the help of such books as were in my possession, to prescribe for them. I early attended a boy fourteen years of age, attacked with the fever, the symptoms unequivocally putrid; I gave bark, wine, and such other remedies as my books directed, but found them of no avail; his disorder grew every day worse, and I was hourly in expectation of

his dissolution. Being under the necessity of taking a journey, before I set off, I visited him, and I thought for the last time, and prepared his parents for the event of his death. While conversing on this distressing subject, I observed in the corner of the room a tub of wort working; the sight brought to my recollection an experiment I had somewhere met with, of a piece of putrid meat being made sweet by being suspended over a tub of wort in the act of fermentation. The idea rushed into my mind that the yeast might correct the putrid nature of this disease, and I instantly gave him two large spoonsful, and told the mother if she found her son better, to repeat the dose every three hours. On my return, after a few days, I anxiously inquired after the boy, and was informed he was recovered. I went immediately to the house, when the boy opened the door and looked surprisingly well.

Second Cure of a Putrid Fever.

“After I left Brampton, I lived in Leicestershire. My parishioners being opulent, I dropped the medical character entirely, even with my own family. One of my domestics falling ill, a fever ensued, which in its progress became putrid. Having great reliance, and deservedly, on the apothecary’s judgment, the man was left solely to his care; till finding every effort baffled, he told me he considered it a lost case, and that in his opinion the man could not survive twenty-four hours. I then determined to try the yeast; his pulse, though feeble, began to get more composed and full; in thirty-two minutes from his taking it he was able to get up from his bed, and walk in his room. At the expiration of the second hour, I gave him a basin of sago, with a good quantity of wine, lemon, and ginger. He ate it with an appetite; in another hour I repeated the yeast; an hour after which I gave the bark; the next hour he had food; the next hour had another dose of yeast, and then went to bed; it was nine o’clock; he told me he had a good night, and was recovered. However, I repeated the medicine, and he was able to go about his business as usual.”

Third Cure of a Putrid Disorder by Yeast.

“About a year after this, I was riding past a detached farm house, at the outskirts of the town. I observed a farmer’s daughter at the door apparently in great affliction. On inquiring the cause, she told me her father was dying. I dismounted, and went into the house to see him, and found him in the last stage of a putrid disorder; his tongue was black, his pulse scarcely perceptible, and he lay stretched out like a corpse, in a state of dropsy insensibility. I then immediately procured some yeast, which I diluted with water, and poured down his throat, but left him with but little hope of his recovery. I returned in about two hours and found him sensible and able to converse. I then gave him a dose of bark: he afterwards, at a proper interval, took refreshment; I staid with him till he repeated the yeast, and then left him, with directions how to proceed. I called upon him the next morning at nine o’clock; I found him apparently well and walking in his garden. He was an old man upwards of seventy.

I have since given the yeast to above fifty persons labouring under putrid fevers; and what is singular, I have not lost one patient.”

Mustard Plasters.—Blisters must be carefully avoided in putrid fevers. There is such a tendency to putrescency in the fluids that mortification is very likely to follow their application. If the pain of the head be great, and delirium present, a mustard plaster, as before intimated, may be applied for a short time to the nape of the neck.

Bathing the head and feet.—Great attention must be paid to the act of bathing the feet and head. Nothing has a greater tendency to mitigate pain than this practice. Cold water and vinegar may be applied to the head. It abstracts the heat from it, and equalizes the circulation.

Remission.—When there is evident remission, the following prescription may be given :

Take Peruvian bark, (*Cinchona officinalis*,) one ounce.

Virginia snake-root, (*Serp. Virginiana*,) half an ounce.

Maderia wine, one quart.

From half to a wine-glass full may be taken every two hours during the intermission.

Gargles.—The mouth must be frequently cleansed with vinegar and water, or wine and water sweetened with honey.

Pain and Restlessness.—If there is much pain, distress, restlessness, and want of sleep, give ten grains of *diaphoretic powders*, particularly at night. They are anodyne, diaphoretic, refrigerant, antiseptic, and diuretic. Their operation must always be aided by an infusion or tea of *balm* or *catnip*.

REGIMEN.

In this type of fever, the practitioner should endeavour, as far as practicable, to counteract the tendency of the fluids to putrescency.—To keep up the strength of the patient, and to aid the salutary efforts of nature in expelling the cause of the complaint, by promoting perspiration, and the other evacuations.

Pure Air.—As impure air occasions the disease, pure air will have a tendency to remove it. Hence there must be a current of air admitted in the room, but not suffered to come in contact with the patient's body. The propriety of this will be obvious, when we reflect upon the putrid exhalations of the breath by perspiration, bowels, &c.

Vinegar should be frequently burnt in the patient's room, particularly after the bowels have been evacuated. The hands, body, and face of the patient may occasionally be bathed with vinegar. Bitter and aromatic herbs may be kept continually in the room. If it is in the winter season, let these herbs be boiled with vinegar and water, and let the vapour from them be diffused through the room. This is not only very refreshing to the patient, but it likewise prevents the spread of the contagion among attendants, or others. As little noise as possible should be permitted, and the patient must be kept cool and quiet.

The diet should be vegetable and nutritious; such as panado, Indian or oat-meal gruel, mixed with wine, and acidulated with the juice of orange, or currant jelly. Ripe fruits of every kind may be taken. Tamarind, cream of tartar water, lemonade, &c. may be occasionally taken as a change.

Cold water may also be drank with safety and advantage.

PREVENTION.

Having pointed out the mode of treatment to be adopted when the disease actually takes place, it seems proper likewise to mention the precautions it may be necessary to pursue, in order to prevent its contagion from being communicated to others.

Dr. Thomas has the following remarks on the prevention of this fever:

“When the disease arises, the sick ought to be removed to a clean and well-aired room in the most remote part of the house, and as much separated from the rest of the family as possible; his bed-linen should be changed frequently; his body be kept clean; whatever comes from him, either by stool or urine, be immediately removed and emptied; and his chamber be well ventilated by allowing a free admission of fresh air into it; it may likewise be sprinkled frequently with warm vinegar, in which some of the aromatic herbs have been infused. No fire should be kept in the room. In summer the patient should be covered only with a sheet, and in winter with a single blanket above the sheet. The good effects which arise from removing patients in this fever from contaminated air, are particularly remarkable among the poor; for a great many of them will recover when brought to an hospital or ward of recovery, although they take little or nothing medicinal; whilst those who remain at their own houses and have the best medicines and attendance, will sink rapidly. None but the necessary attendants should have any communication with the sick; and these, to guard against contagion, should avoid sitting down on the patient's bed; and they must likewise carefully avoid inhaling the vapour arising immediately from his body. When near him, they may keep a sponge or handkerchief, moistened in camphorated spirit or vinegar, to the nose and mouth.

“In every species of typhus, direct and immediate exhalations from the sick, provided there is a sufficient approximation or actual contact of another, are indisputably equal, in some cases, to the infecting such person, even when the most minute attention shall have been paid to cleanliness and ventilation.

“In hospitals, camps, and on board of ships, where a number are unavoidably crowded together, so as to render it impossible to cut off the communication between the healthy and the diseased, the simple means before recited will not prove sufficiently powerful for destroying the contagion, and therefore others must be adopted. In all such instances, besides well fumigating the apartments, clothes, beds, bedding, and hammocks of the sick, as hereafter advised, changing them frequently for fresh ones, paying the strictest attention to cleanliness in every respect, well ventilating every place where they are lodged by a constant and free admission of fresh air,—we should oblige those in health, as well as those tainted by the contagion, to undergo daily ablution with cold water.

“Nitric acid has been used by the late Dr. Carmichael Smyth, as a fumigation, with great success in this fever. In the year 1780, the disease broke out among the Spanish prisoners confined in Winchester Castle; he embraced the opportunity of giving the remedy a fair trial, and obtaining the most decisive evidence of its happy power in preventing

the spreading or farther communication of the infection. He found he could use it without risk or inconvenience to respiration, and therefore thought it the most proper antidote to be applied, where persons are unavoidably obliged to be present.

"The Doctor's mode of obtaining nitric acid gas, is by decomposing nitre by means of heated sulphuric acid, which may be done as follows: Put half an ounce of this acid into a crucible, glass, china cup or saucer, and warm this over a lamp, or in heated sand, adding to it, from time to time, some nitre: these vessels he directs to be placed at 20 or 30 feet distance from each other, according to the height of the ceiling and the virulence of the contagion. In hospitals and prisons, he advises the lamps or vessels containing heated sand to be placed on the floor; but on board of ships, he recommends to hang them to the beams by waxed silk cords.

"From the well-known efficacy of the sulphuric acid in destroying contagion, he advises it to be employed as a fumigation for clothes and furniture, &c.; but for purifying empty prisons, hospital wards, and ships, he gives preference to the nitric, its vapour being more volatile and penetrating, and not leaving the disagreeable smell which the sulphuric does, and thinking it at the same time equally efficacious."

In concluding this section on typhus, I shall quote the remarks of Dr. Thacher: "It remains," says he, "to caution the inexperienced physician against an error in practice, of which he may not be aware. It is that of doing *too much*, and expecting more from our art than can be realized. Typhus is a subject not so easy of control as some may imagine; it will in general run its course, and it is even doubtful, whether in the aggregate, more lives are saved by what is termed bold, vigorous, efficient practice, than by the most simple mode of treatment, and more reliance placed on the efforts of nature, carefully regarding her dictates, and judiciously fulfilling her indications."

PLAGUE. (*Pestis*.)

DESCRIPTION.

The Plague is a very malignant fever, of a putrid and contagious nature, characterized by extreme debility, buboes, carbuncles, red or purple spots upon the skin, hæmorrhages, diarrhœa, &c. The infection of this disease is of a specific nature, producing febrile symptoms, and affecting the nervous and glandular system.

The Plague is, in strict nosological language, a continued fever closely allied to typhus, and therefore demanding notice more particularly in this place. In its symptoms and progress, we shall trace an obvious resemblance to those of typhus.

The historical details connected with this very singular disease are highly interesting. The ancients do not appear to have been acquainted with it, but it must be confessed that its origin and early history are involved in much obscurity. For many centuries past it has been *endemic* on the shores of the Mediterranean; and though it has occasionally

shown itself in other latitudes, as at Moscow in 1771, and in England in 1665, yet in that situation only is it all times to be met with. Grand Cairo may be considered as the great *nidus* of the contagion of plague, and from this point, at particular seasons, it spreads with a malignity scarcely to be estimated.

The plague is by most writers considered as the consequence of pestilential contagion, which is propagated from one person to another by association, or by coming near infected materials.

Some, however, have doubted whether the disease is really contagious or not, whilst a few have asserted positively that it is not so: an absurd doctrine truly, which, if acted upon by Legislatures, would be likely to be attended with the most injurious consequences. The fact that it is evidently contagious is fully established in Sir James M'Gregor's opinion; but the laws of its transmission are not more accurately known than the specific nature of the contagion. Dead bodies, we are told, did not seem to convey it; the heated animal body, and still more with a febrile moisture on the skin, appeared to transmit it most readily. Among the most obvious causes which contribute to induce the plague, besides contagion, may be enumerated the following, viz. corrupt or damaged grain, putrid fish or other animal substances, noxious exhalations arising from stagnant waters or slimy mud, a residence in confined situations where the current of air is obstructed, and the want of due cleanliness.

The disease attacks persons of all ages and both sexes indiscriminately: but women, young people, and infants at the breast, have been observed in general to resist infection more than robust men. Those who were exposed to vicissitudes of heat and cold, such as bakers, cooks, and smiths, were noticed, during the campaign in Egypt, to be more particularly attacked with it.

In all epidemic plagues, terror and anxiety, filth and defective nutriment, fatigue and hurry, anger and intemperance of every description, have acted as predisposing and accelerating causes of the distemper.

The plague is known to be most prevalent in Egypt soon after the inundation of the Nile, or rather its recession; for a quantity of slimy mud being deposited on the banks of the river and other places it has overflowed, occasions humid mephlitic exhalations to arise, and which are supposed to produce the disease. From Sir Robert Wilson's account of the diseases of Egypt, there is great reason to suppose that a humid state of the atmosphere is favourable to the production of the plague; for the English and Turkish armies which marched to Cairo escaped contagion, notwithstanding almost every village was infected; while the troops that remained stationary on the moist shore of Aboukir were severely affected, and lost many men. A dry atmosphere appeared to him not only to be a preventive of the plague in some degree, but likewise to act as a remedy; for we are told that several men confined with this disorder in the hospital at Jaffa, escaped into the Desert, and endeavoured to reach the army; but finding the attempt impracticable, they returned in three days perfectly recovered.

The general resemblance which plague bears to those malignant

forms of typhus fever, which are occasionally witnessed in cold countries, must be abundantly obvious. The great distinction between them lies in the occurrence of buboes; in other words, in the tendency which plague has to affect the lymphatic system. This line of distinction however is so broad, that plague is to be viewed as a continued fever, allied indeed to typhus, but differing from it in the important circumstances of having its origin in specific contagion. That the plague is a highly contagious disease cannot for a moment be made a matter of dispute; but some physicians have maintained, that it is not a fever *sui generis*, generated by a specific contagion, but only an aggravated form of typhus; in support of which opinion it has been argued, that cases of typhus complicated with buboes have sometimes been observed in this country. This idea, however, is entertained only by a few, and the doctrine of a specific contagion in plague is that which is now generally received. Its laws have been investigated with some accuracy, and the following seem to be the most important of those which have hitherto been ascertained.

1. The *latent period* of the contagion of plague, or that between communication with an affected individual, and the appearance of symptoms, varies in different cases. It is scarcely ever less than three days, and it seldom exceeds six. Instances indeed are recorded of the disease not appearing until the tenth day, but these cases are rare.

2. The contagion spreads to a very small distance only from the body of the patient. The consequence of which is, that the disease is seldom, if ever, communicated except by actual *contact*.

3. The dead body does not communicate the disease so readily as the living. This appears to be well understood in Turkey; but that the contagion is sometimes received from the dead body, cannot, I apprehend, be doubted.

4. The contagion of plague is readily imparted to *fomites*, in which it may lurk for a very long time, more particularly if secluded from the air.

5. Re-infection is occasionally observed, but, upon the whole, is not common. The individuals throughout Turkey, who are employed about the persons of plague patients, have, with very few exceptions, undergone the disease. Sufficient instances, however, are met with of persons taking the disease a second time, and even dying of the second attack, to make all who have previously had it, cautious in their intercourse with the affected.

6. Plague, like the small-pox, may be taken by inoculation. The experiment has been tried in several instances, but in none has it succeeded in mitigating the disorder. Dr. Whyte in 1801, and Mr. Van Rosenfeldt in 1817, paid with their lives the forfeit of their temerity. The former died on the fourth, the latter on the second day of the disease.

Plague I have stated to be epidemic in Egypt; and both at Cairo and Constantinople cases of the disease are almost always to be met with. In other words, they occur *sporadically* in those places. While the English army was in Egypt in 1801, cases of plague were continually occurring; but the judicious regulations then adopted, coupled with the

state of the air, prevented the disease from spreading, and the troops suffered but very little. At Malta, however, in 1813, and in the Ionian Islands during the years 1815-16, the plague raged epidemically; and from early times it has been observed, that at certain seasons the plague disseminates itself with extraordinary malignity. To this nothing can give any effectual check but the enforcement of severe measures by the strong arm of military power. At Marseilles in 1720, at Messina in 1743, at Grand Cairo in 1759, and on various other occasions, when the plague was suffered to advance without any such control, the ravages which it committed were of incalculable magnitude. The establishment of a cordon around the whole of the affected district, the rigid seclusion of families, the immediate removal of all suspected cases into quarantine, and of all decided cases to the lazaret, are the preventive measures of most obvious importance. By these, promptly and vigorously exerted, the extension of the plague in the Ionian Islands has been several times, in the course of the last five or six years, prevented: and it is now no longer questionable, that it might in the same manner be effectually checked in every part of the Turkish Empire.

SYMPTOMS.

A feeling of great languor and lassitude ushers in the attack of plague, which for the most part happens towards evening. There is always a cold stage, though it is seldom of long duration. Heat of skin, headache, and giddiness succeed. The pain of the head is referred to the temples and eye-brows. The eyes appear heavy, dull, and muddy. The expression of countenance changes in a remarkable manner. Sometimes there is a wild and furious look; sometimes a look claiming commiseration, with a sunk eye and contracted feature. The most striking of all the early symptoms of plague is the *staggering*, and the sudden extreme prostration of strength. A strong tendency to void the urine is generally noticed. The stomach is very irritable, and rejects almost every thing presented to it. The tongue is white and moist. The bowels are sometimes torpid, and at other times loose, the evacuations being always highly offensive. The speech falters. The pulse is at first small, hard, and quick; but after the appearance of buboes it often becomes fuller and softer. It is sometimes intermittent. In point of frequency, its average may be stated at 100. The heat of the skin is seldom very intense. The head is occasionally perfectly clear and collected. At other times, stupor occurs immediately after the formation of the hot fit. Some cases of the disease are ushered in by a violent fit of mania. The greatest indifference with regard to recovery prevails, which is always reckoned a most unfavourable symptom.

After one, two, or at farthest three days, pains in the groins and axillæ announce the formation of *buboes*. These pains are often highly acute, and unless speedily followed by the swelling of the gland, the patient dies delirious. In women the axillæ, in men the groins are chiefly affected. Carbuncles appear at the same time, but indifferently on all parts of the body. Petechiæ and vibices are much more frequent than carbuncles, which it appears do not occur above once in twenty

cases. The fatal termination is sometimes preceded by violent hæmorrhages from the mouth, nose, or intestines.*

The duration of the disease is very various. A few cases are on record, where the patient died within a few hours from the invasion. To many it proves fatal during the first paroxysm or period, which includes the time from the evening of the attack to the close of the following night. The third and fifth days are, however, upon the whole, those of the greatest danger. The former is the usual period of the appearance of bubo; the latter, of the abatement of the febrile symptoms. If the patient survives the fifth day, and the bubo is fully formed, he may be considered as nearly out of danger. The convalescence indeed is always very tedious, from the extreme debility which the disease leaves; and the patient's life is not unfrequently again put into imminent hazard from the occurrence of gangrene in the extremities.

Such is the train of symptoms which characterize this disease. Some idea of the extent of the mortality which it occasions may be formed from the fact, that out of 700 persons attacked by it in the district of Lefimo in Corfu, 1815, seventy only were saved, and 630 died. It is curious, however, to observe, that occasionally this very formidable disease assumes a totally different character. The *mild* form of plague is not peculiar to any families, or classes of persons, or districts, or periods of the epidemic. It is more commonly met with towards its decline, but it is observed occasionally even from the very first. Buboes form in this variety of the disease about the usual period, generally with a good deal of inflammation, and go on to suppuration. Carbuncles and petechiæ, however, are never observed to attend it. It is marked by the same set of febrile symptoms as characterize the malignant form of the disease, but they are all milder in degree. It terminates occasionally by a critical discharge, but does not appear to require, or to be at all affected by common medical treatment. A few cases have been recorded of plague appearing in the form of buboes, without any constitutional affection.

A circumstance of some importance, as tending to point out the analogy between the plague and other forms of continued fever, has been taken notice of by Sir James M'Gregor, in his Medical Sketches of the Expedition from India to Egypt;—I mean the effect of season, ventilation, and peculiarities of soil, in modifying the character of the symptoms. The cases of plague which occurred in the cold months of the year were marked by an inflammatory state of the system. Those which were sent in from crowded hospitals were attended from the very first with low or malignant symptoms. Those which occurred when the army was encamped near the marshes of El-Hammed, showed a kind of remittent or intermittent type.

DISSECTION.

Dissections of the bodies of those who have died of the plague have

* This detail of the symptoms of Plague is abstracted, by permission of Sir J. M'Gregor, from the official reports of the epidemic of 1816, transmitted to the Army Medical Board by the officers in charge of the Plague Hospitals in the Ionian Islands.

discovered the omentum, stomach, and intestines gangrenous in some places; the liver in a state of congestion and considerably enlarged, the gall bladder filled with black fetid bile, and the pericardium with a bloody fluid. Proofs of inflammation and gangrene have also been found in the brain and its investing membranes, in the lungs, and kidneys. In many instances the glandular system has been found in a very diseased state, and the blood black and loose in its texture, similar to what occurs in putrid fever.

COMMON TREATMENT

Bleeding, mercury, antimony, salts, &c.

REFORMED PRACTICE.

From the nature, history, and symptoms of this disease, the indications to fulfil will appear very obvious. The impropriety of bleeding, where there is such excessive debility, must be apparent. It is stated that "Dr. Whyte, one of the physicians to the forces in Egypt, used the lancet very freely, but that every one of his patients died."

The treatment evidently called for in the plague, is nearly pointed out under the preceding type of fever, (*typhus gravior*) which it very nearly resembles.

Purgatives have been almost proscribed by some practitioners. But, from the large quantities of fetid, bilious matter, secreted by the liver, and thrown into the stomach and first passages, it appears clear that *vegetable purgatives* are indispensably necessary. So far from inducing, they will remove debility, by evacuating the morbid and feculent matter attendant on the complaint.

Emetics have been found by those most experienced in the plague, to be very valuable. They therefore should be given as early as possible, and occasionally repeated, according to the severity and symptoms of the disease. I am confident that no emetic, from its extensively stimulating effects, will answer a better purpose than the *lobelia inflata*.

Sudorifics are the principal class of medicines to be relied upon, to expel from the system the peculiar *virus* or poison, which is the immediate cause of the disorder. The patient, therefore, should be put into a state of perspiration as speedily as possible, by the usual means, to be continued till a crisis or remission succeeds. A writer states, "it has been observed that a gentle *diaphoresis* or *sweating* sometimes proves critical and carries off the disease."

Antiseptics must be administered, if symptoms of putrescency appear. The same as recommended under the head of *malignant fever*. If there be great prostration, good wine may be drank. Infusions of *medicinal plants*, such as *balm*, *catnip*, *snake-root*, *mint*, may be freely taken; also, lemonade, cream of tartar, whey, and other diluent, acidulated drinks.

Ablutions, or bathing the whole body very often with the *alkaline wash*, (ley water) will be found one of the most powerful and salutary remedies. It usually requires not more than fifteen minutes measurably to remove the most violent heat of the skin, and lower the pulse to its natural standard. The feet must also be immersed morning and night in the same liquid

Savary, in his Letters on Egypt, mentions an anecdote which is considered by Dr. Falconer as much to his purpose. The captain of a ship, whose sailors had contracted the plague at Constantinople, caught it himself by attending on them: he felt, as he expressed himself, excessive heat, which made his blood boil; the disease seized his head, and he perceived (as he thought) that he had only a few moments to live. The little remaining reason he had, taught him to attempt an experiment: he laid himself down quite naked on the deck: the heavy dews that fell, penetrated, according to his sensations, to his very bones. In a few hours he could breathe better; his agitated blood became calm, and bathing the morning after in the sea, he was perfectly cured.

This case brings to my recollection another, of a French soldier, and reported by Dr. Desgenettes, who being afflicted with the plague, threw himself into the Nile, under a high degree of delirium, and on being taken out of the water after a short lapse of time, soon recovered from the disease, seemingly in consequence of his immersion. A similar case is brought forward of the good effects derivable from the sudden application of cold water by Sir Brooke Faulkner, in his Observations on the Plague.

Water applied to the surface too cold, when the excitement of the blood vessels runs high, or when it is reduced very low, increases reaction in the first stage, and prevents it in the latter. In the intermediate stages of the disease it is useful. Water which has stood awhile in the air, allays thirst much more than when it is very cold. This has been confirmed by the experience of persons who work in the open air in hot weather, as well as by patients in fever.

Mustard Plasters may be applied to the nape of the neck and to the bottom of the feet, for pain in the head or delirium.

For sickness at the stomach, local pains and congestion, make use of the same treatment as recommended under the head of other types of fever.

Anodynes, combined with *Diaphoretics*, may be given to procure sleep and produce perspiration. Nothing will equal the *Diaphoretic Powders*, which may be given two or three times a day.

PREVENTION.

Remove the sick into clean, airy, and well ventilated apartments. Let there be as little communication with them as possible. Oblige ships, persons, and all kinds of merchandize coming from places infected with the plague, to undergo a rigid quarantine. Let every species of filth be removed from houses, and let them be often fumigated. Avoid fatigue, sudden transitions from heat to cold, and observe unusual temperance in eating and drinking.

In Dr. Duncan's Annals of Medicine for 1797, is inserted an article relating to the cure and prevention of the plague by frictions of the whole surface of the body with olive-oil, and communicated, as we are given to understand, by George Baldwin, Esq., at that period his Britannic Majesty's agent and consul-general in Egypt.

It is mentioned, that there is no instance of a person rubbing a patient having taken the infection; but, by way of precaution, is is ad-

vised to anoint himself all over with oil, and to avoid receiving the breath of the infected person into his mouth and nostrils. The prevention to be used in all circumstances, is that of carefully anointing the body, and living upon light and easily digestible food.

A striking observation made by Mr. Baldwin is, that among upwards of a million of inhabitants carried off by the plague in Upper and Lower Egypt, during the space of four years, he could not learn that a single oil-man, or dealer in oil, had suffered.

Mr. Jackson, in his *Reflections on the Commerce of the Mediterranean*, likewise informs us, that in the kingdom of Tunis, where the plague frequently rages in the most frightful manner, destroying some thousands of the inhabitants, there was never known an instance of any of the coolies, or porters, who work in the oil-stores, being in the least affected by this disorder, their bodies being always well smeared with the oil, as well as their clothes being imbued with it.

It has been considered as pretty certain that in the generality of instances the contagion of the plague enters the body through the medium of the cutaneous lymphatics, and thence produces the disorder of the lymphatic glands. This idea is illustrated by the probability that the external use of oily frictions lessens the susceptibility to infection; and Sir James M'Gregor mentions a fact which much favours the opinion, by observing, that the men who were employed in applying oily friction to the camels for some epidemic affecting them, escaped the plague.

The evidence produced in behalf of the plan communicated by Mr. Baldwin, seems more satisfactory as to the preventive powers of the application, than as to its sanative properties after the disease has once taken place. It seems, however, right to notice, that Dr. Assalini, who was a medical officer in the French army which invaded Egypt, makes favourable mention of oily frictions in his *Observations on the Plague*, as being generally followed by copious sweating, and to this he thinks their beneficial operation is to be attributed. We are also told by Mr. Jackson, that he recommended the remedy to several Jews and Musulmen during the time that the plague was depopulating West Barbary, in 1799 and 1800; and no instance of its failure, when duly persevered in, even after infection had manifested itself, had come to his knowledge.

SECTION III.

YELLOW FEVER. (*Typhus Icterodes.*)

DESCRIPTION.

The yellow fever is a disease which very much resembles in its character, the highest grades of the *bilious remittent fever*. It is more violent in its attack, and all the symptoms are more aggravated, and there is a greater tendency to putrescency, together with some other distinguishing characteristics.

CAUSES.

Predisposing Causes.—There are many predisposing causes of this complaint, among which may be reckoned, intemperance of every kind. Almost all the first victims of yellow fever, are almost all addicted to the use of ardent spirits, and such are the most liable to fall victims to it. The constitutions of such are more susceptible of the disease, more violent, and more malignant. Another predisposing cause is great fatigue, exposure to damp, wet weather, getting the feet and clothes wet, a check of perspiration, overloading the stomach, and every thing which causes a deviation from health.

Immediate or Intermediate Causes.—A contagious and poisonous gas or gases must be considered the immediate cause of this kind of fever.

“Pestilence or contagion has always been the *peculiar curse of populous cities*. Of about two hundred general plagues, recorded in history,” says Webster, “a few only have been so violent as to spread over countries into villages and farm houses; almost all have been limited to large towns, evidently demonstrating, that they would never have affected mankind, without the influence of impure air, generated in those places. This is a truth, as unquestionable as it is important; and on a conviction of this, hangs the safety of men from that dreadful calamity. Had Mead, and other eminent physicians, taken the same pains to lead mankind into truth, as into error, we should long ago have introduced improvements into the arrangement and structure of our cities, which would have secured our citizens from nine-tenths of the infectious diseases, by which they have been alarmed and distressed.”

“Multitudes and multitudes of lives are annually sacrificed, in all cities, to the avarice of the original proprietors of lots. The little narrow, dirty houses, kitchens and yards, surrounded with high fences, excluding air and vegetation; all that can dissipate or absorb the noxious exhalations; all that can purify the atmosphere, and refresh the exhausted frame of a human being, panting beneath a sultry sun—every thing in our cities is contrived to waste the powers of life, and shorten its duration.”

“Remove the sick, cleanse the houses and clothes, do whatever human art and labour is competent to effect, all will not avail; cases spring up in every quarter, and the disease takes its course.—Then, die we must; for I contend, that if to prevent an epidemic disease is thus im-

possible, there never could be a single instance of recovery from the disease, during the continuance of the pestilential state of the atmosphere. All medical aid would be totally useless, and labour lost; for a disease never can be *cured*, that cannot be *prevented*. I must still be of opinion, that if cities could be rendered more commodious, by a different arrangement of streets and buildings; if the means of putrefaction and cleanliness, both of person and in domestic economy, could be particularly, generally, and universally embraced, and strictly observed, it would interpose an effectual barrier to almost every species of disease. Longevity would be much more frequent, and man, now *like the grass which the wind passeth over, and is gone*, would then fall, like a shock of corn fully ripe, in all the fragrance of wisdom, and maturity of age; every movement in the journey of life being prompted by desire of good, and marked with usefulness, he would only die to live."

In order fully and effectually to secure the inhabitants of any city from pestilential diseases, it is necessary that every lot upon which a house is built should contain one acre of ground, that there be a yard in front and rear, dry cellar, numerous windows, rooms often white-washed, plenty of good water, baths, &c. This will be a sure and sovereign antidote to every kind of infection.

"Physicians," says Brower, "who have written on the subject of fevers and epidemical diseases, observe, that they, almost without exception, commence with the poorer class of citizens, who are too frequently as negligent of cleanliness and neatness of person, as they are regardless of the quantity and quality of the food and drink they consume.

It was not unfrequent, during the yellow fever in Boston, on the first visitation to a patient of the above description, to find him enveloped in a rotten feather bed, little less pleasant to the *olfactories*, than a lump of putrefaction; or rolled up in blankets, quilts and rags, which would not have been more disagreeable, if they had been used in the lowest offices of a foundling hospital.

Frequent bathings, in the warmer seasons, when the blood is in a calm state of circulation, is very salutary, and greatly contributes to the continuance of health. When the body has been a considerable time in full perspiration, the volatile particles of the perspired matter escape, and leave an incrustated matter upon the surface of the body, which often frets and corrodes the extremities of the exhalent vessels, and thus lay the foundation for disease. This is remedied by frequently laving the body in water of moderate temperature. It also agreeably refreshes and invigorates the system, and preserves and enlivens the actions of the lymphatic vessels, upon which the purity of the blood, and the perfect health of the body, very much depend. This practice should become frequent as it was among the ancients, and is now with the inhabitants of the southern and middle latitudes.

To me it seems most probable, that the proximate cause of all fevers affecting the system, generally, is deranged motion, or total want of action in the lymphatic system, consisting of exhalents and absorbents. When these vessels are in healthy motion, all deleterious matters, floating in the common mass of the circulating medium, are

eliminated and perspired. But, let this process be checked, and the skin becomes hot and inflamed; the whole body soon feels all the distress of a fever paroxysm.

Volney, in his *Travels in Egypt and Syria*, Chap. xvii. informs, that "at Cairo, it is observed the water-carriers, continually wet with the fresh water they carry in skins upon their backs, are never subject to the plague." This fact, says Mr. Webster, if accurately stated, is worth an empire.

The most safe, easy, pleasant, and beneficial mode of using water, is, to bathe or wash the body in a private apartment at home. This may be done several ways, either in a large vessel, immersing the whole body at once; or, what is less troublesome, with a single pail or bowl of water, in a bed chamber. The washing may be done with the hand, or a sponge, in a few moments, as the person rises in the morning, or retires at night.

Origin.—There has been great dispute among physicians respecting the origin of yellow fever. Some contend that it may be generated in this country; others that it is imported. Some again contend that it is communicated from one subject to another; others believe the contrary. Hence it has been the theme of fruitful discussion, and controversy. From all the facts that we can gather we are led to believe,

1. That it may be imported from the West Indies, and other warm climates into the United States.

2. That it may arise spontaneously among us from local causes, filth, &c.

It has been satisfactorily ascertained that the infectious effluvia may be generated, or retained in the holds of ships during their continuance in the sea-ports of hot climates. When such vessels arrive at our wharves, the effluvia from them may produce the fever, under favorable circumstances. When the effluvia is introduced, the fever engendered by it, will only attack those who visit the infected vessel or the cargoes, and will disappear entirely when it is removed. The cases which have occurred in Philadelphia, Perth Amboy, and New-York, have been distinctly traced to vessels which have just arrived from the West Indies. This fact is put beyond all controversy, by numerous examples, one of which is very striking; and I shall here mention it. The ship *Ten Brothers* arrived at Boston on the first of August, 1819. Many persons went on board of her when the cargo was discharging, most of whom received the infection. Twelve of these persons living in different parts of the city were attacked with yellow fever; nearly all of whom died. It is remarkable, however, that they did not communicate the fever to any who visited or attended them.

Another circumstance proves that this disease may not only be taken in a warm climate on board of a vessel, but may continue in her for a great length of time, and may be communicated to those within its influence, without any concurring circumstances, except a vitiated state of the atmosphere, heat, &c. This is proved by a United States vessel, some years ago, which had caught the infection in a warm climate, and after they had been out to sea for some length of time, it was communicated to the crew, among whom there was great mortality.

It is a subject of great dispute whether the yellow fever is ever generated in any of the sea port towns of the United States; and this seems to be a subject involved in some doubt and uncertainty. It is probable that the noxious or deleterious effluvia exhaled from masses of public filth, containing putrescent matter generated under a high range of temperature, may cause yellow fever.

"It has fallen to my lot," says Hardie, "to see as much of the yellow fever, as any other individual in the United States, as I was constantly employed by the New-York Board of Health in one capacity or another, from the year 1798, till the year 1814, when I resigned. It will now be the third time, that I have published a book respecting this disease, and as a matter of course, I have endeavoured, as well as I could, to investigate the cause of its origin. After much reflection upon the subject, I have, at last, come to this conclusion, that it may be, and has been imported, and that it also may be, and has originated from local causes. In some of those years, in which we have been afflicted with pestilence, I have found no difficulty in tracing it to some vessel or vessels, which had arrived here from a foreign port; and in others after the most strict inquiry, I could not possibly devise any cause for it, except that it was owing to the filth and dirt of various kinds, which had been allowed to accumulate in our cellars, yards, privies, &c."

At any rate we know that our climate generates high grades of bilious remittent fevers, which often very much resembles yellow fever, and which by some is identified with it. But there is a manifest difference between the two diseases in the history, causes, symptoms, and treatment of the two complaints. Dr. Peixotto has nicely discriminated between these two diseases; the most prominent distinction I shall here notice.

"A careful analysis," says he, "will expose the error in almost every instance.

The yellow fever most usually runs its course in a short time, say from three to five, or to seven days.

The bilious fever generally continues from nine to twenty-one days.

The stomach is always and essentially affected in the yellow fever, as is evinced by the burning heat about the præcordia, the pain at the pit of the stomach, the vomiting of matter not bilious, but evidently a secretion from the stomach itself, or whether a secretion or not, proceeding from this organ alone.

In bilious fever the stomach may indeed be affected, but it is in a milder degree, and this organ cannot be considered the seat and throne of the disease.

The pulse and temperature, in yellow fever, are frequently natural; in bilious fever, they are never so. The appearance of the eyes is very different in the two diseases, as is that of the suffused skin.

The muscular system always suffers under great debility as bilious fever advances, while the arterial system is more and more excited. In yellow fever, on the contrary, the muscular strength is frequently retained to the very hour and moment of death.

The appearances on dissection differ also very materially in the two diseases. To sum up all the points of difference will scarcely be ex-

pected of us in this place. It is enough to mention the different conditions in which the stomach is found, after death, in the two diseases."

The *treatment* required in the two diseases differs essentially. Nor does the real black vomit occur in the bilious remittent.

Is Yellow Fever Contagious.—It is equally evident that the yellow fever is not contagious, except under peculiar circumstances. It is highly infectious within a certain distance of an infected ship or place. In other words, as far as the atmosphere is sufficiently contaminated with the deleterious effluvia, it may be communicated to those who inhale it. This was clearly proved when it last occurred in this city in 1822. A certain part was inclosed, called the "infected district." Those who went within it caught the fever, while those who remain outside, were free from it. But it is equally as clear and as well established, that the fever was seldom if ever communicated to those who visited or nursed such as were sick with it. As soon as they were removed into the country; or even a short distance from the infected part, they never communicated it to a single individual. Those who are the strongest advocates for contagion, seem to admit that it cannot be communicated from one person to another, except the air becomes very much vitiated or impure where the patient lays. Hence it is a great consolation to know under what circumstances the yellow fever is generated and produced. While on the one hand, we entertain no groundless fear of taking the complaint; on the other, it becomes our city authorities to maintain a rigid quarantine.

"If the breath, perspiration, and other excretions of a person, in a yellow fever, be confined in a small close room, they may produce a similar disease, especially when they act upon a body previously debilitated by grief or fatigue. But they are generally inoffensive, where the sick are accommodated in open, well ventilated situations. Out of upwards of one thousand persons, who have carried this disease into the country from our cities, there are not more than three or four instances to be met with, of its having been propagated by contagion. In the city hospital of Philadelphia, there was no instance of this disease being contagious, in 1793, 1797 and 1798. Clothes, impregnated with the effluvia of a person who had died of the yellow fever, might produce a similar disease, but it would be only in consequence of those effluvia partaking of the nature of putrid matters, derived from any other animal source. The same thing may be said of the effluvia emitted from a putrefying dead body."

"Some of the laws of the contagion of yellow fever," says Gregory, "appear to be ascertained with tolerable accuracy. Its latent period varies from two to eight days. Ten days is, I believe, the longest period recorded of yellow fever appearing, after exposure to the contagion, and removal to a freely ventilated atmosphere. The contagion of yellow fever has a peculiar range of atmospheric temperature, but on a higher scale than that of the plague. It has never been known, but in those countries and at those seasons when tropical heats, that is, of eighty degrees Fahrenheit's, or upwards, prevail. It never fails to disappear as the winter approaches. It is certainly a singular circumstance in the history of the yellow fever, that it has never prevailed to any remarkable

extent at a distance from the sea, and that its principal ravages have been on the shores of the Atlantic Ocean.

The last circumstance which it is of importance to notice in the history of the yellow fever and the laws of its contagion, is the question whether it can be taken a second time. The answer is a very short one. Although a few well attested instances to the contrary have been recorded, still a most extensive experience has satisfactorily proved, that the immunity from second attacks is nearly complete, and that it forms one of the most striking characteristics of this remarkable disease."

Mortality of the Disease.—Yellow fever has hitherto been very prevalent in many of our Atlantic cities; in the West Indies, and some other parts. It has ever been very formidable and very fatal, and which may be imputed in a great measure to the want of proper medical treatment. New-York, Philadelphia, Baltimore, Charleston, Savannah and New Orleans, have suffered terribly by this horrid malady, and it has been still more destructive in some of the West India islands. In Havana it is stated that in the month of June (1816, I think,) it swept off, in the course of three weeks, *thirteen hundred persons*.

Proximate Cause.—It is self evident that the proximate cause of this type of fever is a specific poison received from the atmosphere through the medium of the lungs, and which enters the circulation, is thrown upon the liver, and in an attempt or effort to expel it from the system through the medium of this organ and the stomach, vomiting and gastric irritation ensues. The poison also being mixed with the blood is carried to the heart and becomes a foreign irritating and morbid agent, which stimulates it and the blood vessels to a most powerful action to throw it off by the skin and the other excretions.

SYMPTOMS.

The yellow fever usually attacks with lassitude and weariness; chilly fits; listlessness of every thing around; faintness; giddiness; flushing of the face; redness of the eyes; pains in the eye-balls and lower part of the forehead, as likewise in the back; debility and sighing; thirst and a tendency to lethargy; the urine is high coloured, small in quantity, and turbid; the perspiration is irregular, interrupted, and greatly diminished; the saliva is viscid; the tongue is covered over with a dark fur; the bile, which is scalding and acrid, is secreted in unusual quantities, and is thrown into the stomach, from which it is again speedily ejected, and the skin is intensely hot, dry, and hard. The disease continuing to advance, the eyes become of a deep yellow: the face and breast are tinged with the same hue; an incessant retching and vomiting of frothy bile ensues; great costiveness prevails, which is attended with a permanent dilatation of the pupils of the eyes.

There is hardly ever an evident remission until the fever has entirely gone through its first stage, which is generally in thirty-six or forty-eight hours; when there is often such an abatement of the symptoms, as to induce the patient to think himself tolerably well; but an early recurrence of the symptoms in an aggravated form, accompanied with extreme debility, soon convinces him of the contrary. In the last stage of the disease, the greatest debility prevails, and symptoms of universal putre-

faction arise; large patches of livid spots are to be observed on different parts; the tongue becomes dry and black; the teeth are incrustated with a dark fur; the breath is highly offensive; the whole body exhibits a livid yellow in many cases, but not in all; hæmorrhages break forth from the mouth, ears, and nostrils; dark and fetid stools are discharged; hiccups; the pulse sinks, and death follows very quickly. These are the usual symptoms, but there is considerable variation.

A physician who witnessed this disease as it occurred in Baltimore, in the year 1794, thus describes its symptoms:

“The yellow fever as it appeared here, tended naturally to death. A fatal case, therefore, will portray more strikingly its form. ‘The eye of the physician entering the chamber of the sick, would be arrested by a countenance of distress; the countenance of one weeping with the anguish of a broken heart. He would behold a face suffused with blood; an eye red, watery, half closed and sad; the parts immediately around it swoln: its silent glance spoke sensibly to the soul, and seemed to demand its pity. He would find the tongue moist, and white or clean. His hand would feel the skin excessively dry, and parched with heat: a pulse hobbling or intermitting, slow or frequent, full or small, but always tense. He would behold the patient tortured with excruciating pains, rendered less supportable by constant exertion to vomit, till delirium mingled with his groans a frantic laugh or song.’

‘At certain periods, the heat of the skin would abate for a short time, but every other symptom would continue with unremitting violence.’

‘But at length the skin would become cool; the pulse lose its tension and frequency, and every pain cease. The fiery redness of the eye would disappear, and assume the yellow livery of bile. A yellowness would appear about the neck, and gradually extend itself over the whole body. A vomiting of a black fluid would occur, resembling the grounds of coffee. The patient would be sensible of immense and oppressive weakness. As these symptoms increased, the lips would appear cedematous, and the tongue swoln. The skin would be cold, and impart on pressure a sensation like that of a dead person. The pulse would continue preternaturally slow, and generally acquire fulness as death approached. A hiccup would at length occur, the pulse rapidly seemed to pause after every pulsation, as though it were to beat no more. The blood bursts from different parts of the body; the action of the arteries is no longer felt; the heart gradually ceases exertion, while delirium and convulsions announce the victory of death.’

“Those who were exposed to the contagion, would be affected with head-ache, a heat and sense of fulness or oppression in the stomach, want of appetite, a disagreeable taste, and costiveness, a burning of the hands and feet at night; restlessness or drowsiness; heat of the skin, alternately with profuse sweats, frequently of a yellow colour. These symptoms were not always succeeded by disease, yet they proved the precursors of the fever.

“These premonitory symptoms did not precede every case of fever. It would often seize upon its victims with sudden violence, while occupied in the various employments of life, or engaged in the pursuits of business or pleasure. A shaking or chill would usher in the disease in

some, and from its degree of intensity we might suspect the violence of the ensuing case.

It is thus described by Dr. Peixotto, as it appeared both in the West Indies and in this city:

"I shall avail myself of a description of the disease which I drew up after my return from the West Indies, where I had enjoyed repeated opportunities in 1818-21-22, of witnessing it in its most severe forms. In the latter year I studied its character as developed in the epidemic of Rector-street, and was struck with the striking features of identity displayed with the tropical fever in all its more aggravated cases.

"The disease generally invades the patient with the ordinary symptoms of fever; slight rigors, seldom amounting to a chill; pain in the head and loins; uneasy sensation about the stomach, and a general sense of weariness. Sometimes the symptoms are altogether wanting, and pyrexia seizes the patient suddenly: at other times they continue for several hours, and then are succeeded by increased arterial action, quick, full, and chorded pulse; great, and even pungent heat of skin; increase of the pain of the head, more particularly across the eye-balls; soreness and pains of the loins, stretching forward to the umbilicus, or shooting down the thighs and settling in the calves of the leg, in which the patient likewise complains frequently of a sense of weakness. The countenance has a sad and characteristic appearance; the eyes are inflamed and watery; the tongue is slightly covered with a whitish mucus, and is most frequently moist. The skin is sometimes of a dingy hue, mostly not altered in its appearance, and frequently it is covered with a slight moisture. The stomach is very uneasy, experiencing a sense of vacuity, sometimes of hunger, and is generally painful on pressure from without; in some cases it retches even at this early period, and if vomiting be superadded, the prognostic is fearfully certain. The bowels are costive, and respond with difficulty to the action of purgatives. The urine is scanty, and what is voided is reddish and clear. The mind in general is serene, but fearful of the event.

The symptoms continue increasing for forty-eight or sixty hours, when relief seems approaching in a temporary alleviation of the more violent symptoms. The febrile heat and pain yield and frequently go off altogether. But when the stomach has once been disordered, there is no sensation of its sufferings. This second stage has not inaptly been termed, by Mosely, *Metaptosis*; it is the token that reaction is exhausted, and the system is undergoing a rapid change, from a state of excitement to one of collapse and passive suffering. The third or last stage accordingly develops itself sooner or later in the sunk and irritable pulse, though in some cases it is little changed, the low temperature of the body, constant sighing, burning sensation in the œsophagus, occasional delirium, the approaching coldness of the extremities, and yellowish suffusion appearing first about the angles of the mouth, and on blistered surfaces, particularly in moments when the patient either from vomiting or any other exertion is exhausted, and then diffusing itself over the neck, breast, and whole body. The patient complains now of increasing uneasiness about his stomach, and is urgent for cold drink, which is no sooner taken that it is rejected and accompanied with increasing quan-

tities of black membranaceous flocculi swimming in the fluid, and of a slate coloured sediment at the bottom. He is frequently free from all disturbance, and inclines to doze, but he no sooner falls into a slumber, than the perturbation of his stomach becomes perceptible, and vomiting is brought on. He now lies on his back, with his knees drawn up in the bed, and is intolerant of any covering about his head: he occasionally sighs, and tosses his hands to and fro; is anxious for something hard upon which to press, and frequently leaves his bed with insane violence, and grasps the floor or the bed and seems to experience relief from indulgence. Hiccough, increase of black vomiting, dark and fetid stools, hæmorrhage, and perhaps a convulsive fit ends his acute sufferings.

Such is a general outline of the train of phenomena characterizing this disease, whose mortal progress it is the severe duty of a humane physician to watch with scarce a hope of any other reward to his labours and anxiety, except an addition to his melancholy experience."

All cases are not, however, thus distinctly marked.

DISSECTION.

Dissection of the bodies of those who have died with the yellow fever have shown the coats of the œsophagus corroded; the stomach and intestines loaded with a black fetid matter, or both to be often much inflated, inflamed, and sphacelated; the liver, in many cases, to be shrunk to less than half its natural size, very flaccid, and of a colour approaching to buff; and the gall-bladder to be flaccid and greyish, having but little bile contained in it. In some instances the lungs have been found inflamed; and the bladder has been observed to be much thickened, and to contain a considerable quantity of urine. In those cases where there has been a discharge by vomiting of a black coagulated matter resembling the grounds of coffee, the gall-bladder and biliary ducts have been found distended with the like substance. Where an affection of the head has formed a prominent feature of the disorder, the integuments of the brain have been observed more or less inflamed, the vessels of the dura and pia mater to be very turgid with blood, and occasionally there has been extravasation. Sometimes the volume of the brain has been found increased, and the substance of it more firm than usual.

COMMON TREATMENT.

Bleeding, mercury, salts, and blisters.

That the reader may have an opportunity of seeing to what extremity blood letting is recommended by physicians, in this fever, I will give the remarks of Eberle, taken from his practice, page 106.

"Dr. Robertson, in his account of the yellow fever of New-Orleans, states, that during the first 12 hours, he frequently drew from 50 to 60 ounces of blood;* and Dr. Belcher bled to the extent of from 50 to 80 ounces in the first stage with much advantage.† In a disease so impetuous in its attack, and so apt to develop local inflammations, much, and

* Johnson on Tropical Climates, vol. ii.

† Edinburgh Med. and Surg. Journal, 1825.

often every thing depends on an early and powerful antiphlogistic impression on the system. Where the reaction of the heart and arteries is vigorous, the blood should be suffered to flow until fainting approaches, "for it is not only by unloading the vessels, but by the *shock* also which it gives to the system, that blood-letting proves so serviceable in inflammatory fevers." Dr. Anthony Musgrave, states, as soon as the febrile reaction was developed, after the invasion of the disease, he derived the greatest benefit from the immediate and rapid abstraction of blood, to an extent limited less by the quantity than by its decided effect upon the action of the heart and arteries.* Dr. Rush, as is well known, was a zealous advocate for blood-letting in the disease. "I paid no regard," he says, "to the dissolved state of the blood, when it appeared on the first or second day of the disorder, but repeated the bleedings afterwards in every case when the pulse continued to indicate it." "In a disease like this," says Dr. Robertson, "where the danger is frequently imminent in twelve hours, it is often surprising to see how much its apparent character may be altered by active depletion." A host of other able practitioners might be cited in behalf of the usefulness of this practice. In those instances of the disease, however, where the nervous system appears to be in a manner overwhelmed by the remote cause of the fever; when the patient exhibits an air of confusion or intoxication, with great agitation, "and a dash of wildness gleaming at intervals over his agonized features:" when he complains of little or no head-ache, but is impatient and irritable, yet oppressed: and after the first days, sinks down with a careless expression of resignation—in such cases blood-letting is wholly inadmissible. Here we must rely chiefly on the prompt and liberal administration of *calomel* with a view to its salivary operation."

A more speedy way of destroying the patient could not be invented, except he were killed outright, than bleeding and the use of mercury. The first brings on dangerous, if not fatal sinking; the second, mercury, brings on a putrid state of the fluids much sooner than would take place, if the disease were left entirely to the efforts of nature. There are some West India physicians, however, who pursue a more judicious, and successful course of treatment. They use only mild laxatives, acidulated drinks, glysters, and externally cold applications. This is certainly an improvement on the old method.

REFORMED PRACTICE.

Indications of Cure.—The great object to be accomplished in the treatment of this kind of fever, is to use the most prompt and energetic means, to expel the poison from the system.

1. The arterial excitement must be moderated, if excessive.
2. Excite a healthy action of the stomach and liver, which is always in a very morbid condition.
3. Remove local congestions.
4. Correct the putrescent state of the fluids.
5. Support the strength of the patient; to accomplish which attend to the following particulars:

* Treatise on the Yellow Fever of Antigua.

First—The Stomach.—The stomach in this complaint is in a very irritable and morbid state, in consequence of a secretion of acrid, vitiated bile from the liver. Probably an acid of a peculiar nature is generated. It therefore becomes necessary to use the most prompt and energetic means to bring about a healthy state of these organs. Emetics have been proscribed by almost all practitioners, by reason of the extreme irritability which exists; and that too very justly, except an opportunity offers to prescribe before this state of the stomach appears, previous to which, a vegetable emetic may be given with safety and advantage. It will have a tendency to mitigate the violence of the disease, and act favourably upon the liver. When, however, retching and vomiting takes place, an *Emetic* ought not to be given.

Second—The Bowels.—It is indispensably necessary in any stage of this fever to administer brisk purgatives. The same kind may be given as directed in the preceding disease, viz. *The common or antibilious physic*. When the stomach is overloaded with bilious matter, it often acts as a mild emetic, then as a cathartic, evacuating the stomach and first passages, thoroughly, and exerting a healthy action upon the liver, and the whole alimentary canal. These purgatives relieve the head, lessen the fever, and in every respect, improve the condition of the patient.

Where the stomach is very irritable, and excessive vomiting prevails, such medicine must be given as is calculated to allay it. The following preparation may be given:

Take Rhubarb, (*rheum palmatum*,) powdered, twenty grains.

Sal æratus, (*bi carbonas potassæ*,) twenty grains.

Peppermint plant, (*menth. piperit.*) a teaspoonful, pulv.

Add a gill of boiling water.

Laudanum, (*linct. opii.*) fifteen drops.

Brandy, a table-spoonful. Mix.

Sweeten with loaf sugar. One table-spoonful of the above may be taken at a dose, and repeated every half hour until it ceases. This will be found an admirable remedy for removing nausea and vomiting which prevails in this fever.

One writer states that in some instances, the vomiting has been known to cease, upon the application of a large poultice of mustard flour to the stomach and feet, which ought not to occasion inflammation of the skin.

The benefit of rubefacients has been mentioned by others.

Dr. Chapman, of Philadelphia, states that in yellow fever, they may be early resorted to. "Taught by dissections, as well as by the leading phenomena or symptoms, that the stomach is the seat of this pestilence, inducing a malignant gastritis, (inflammation of the stomach,) a prompt application of a large blister over the region of the stomach is obviously indicated and all experience confirms its utility."

A mustard plaster will be found far preferable to blisters.* It will

* "I had a case of black-vomiting in my own family, on Long-Island, this season (1799.) A young girl, my niece, three days after leaving the city, in the month of September, was found to labour under the usual symptoms of the pesti-

be necessary to give a purgative every day, and if the attack is very violent, twice a day, particularly in the first stage of the disease. I have been called where delirium was present from an accumulation of bilious matter in the system inducing fever, in which the administration of a brisk cathartic, has restored the patient to a sane state of mind, diminished the fever, and apparently cut short the disease at once, or within twenty-four or forty-eight hours. The quantities of offensive or bilious matter discharged has been truly surprising. In one instance the health officer had previously been giving only, an infusion or the tincture of *snake-root*, as a tonic.

After pursuing these means, should vomiting and retching still continue, give the following:

Take Epsom salts, (*sulphas magnesiae*,) eight ounces

Warm water, eight ounces.

Muriatic acid, one dram.

After the salts have been added to the water, add the acid. Of this give a large table spoonful every hour in a gill of cold water, until it acts upon the bowels. After every dose, give a small teacup full of warm tea of any kind. One or two doses usually purges. This preparation was prepared and used by a celebrated physician of Dublin, (Ireland,) as a substitute for mercury. From its excellent effects in many cases, it was kept a great secret and is now extensively sold and used in

lence. Apprehensive of the threatened state of the stomach, I evacuated the alimentary canal as soon as possible, by cathartics, and ordered the bowels to be kept open by clysters. Toward the close of the second day of the malady, she vomited up dark-coloured matter in the usual manner, and I believed the time of her death was very near. As I had never known any remedies, whether acid, or neutral, nor of any other quality, do good in that dangerous condition of the stomach, but had always found every thing taken in of the medicinal kind to do harm, by increasing the irritation and disposition to vomit, I determined, in this case, to leave the stomach as much to itself as I could. I therefore withheld all medicines, and forbade the administration of food, until the patient should ask for it, and gratified her to the full, by allowing the draughts of cool water she called for. The surface of the body was bathed frequently with cool salt-water and soap-suds alternately. The black-vomiting ceased toward the end of the third day; and after an abstinence of eight days from all kind of food, she asked for a roasted potatoe. During those eight days, she drank no drink but cool water; and, what is very remarkable, at the end of that time possessed more strength than she did on the third day from the attack. She recovered, and has been very well ever since. I am quite satisfied, from the ill-success of giving medicine to stop black-vomiting, that the best way is to let the stomach remain as much at rest as possible, and not be tormented and thrown into convulsions by foreign matters taken down. In order to make this mode of management successful, the alimentary canal ought to be cleared effectually, in the early part of the disease; and the large intestines should be plied with injections. A physician, who stayed in New-York the whole of this season, informed me he had, in addition to a total cessation of remedies by the mouth, given injections from time to time with large quantities of laudanum, in some cases as much as half an ounce at a time. While this thebaic tincture acted upon the large intestines, the vomiting stopped, and the stomach was easy. If, when its effects was past, the vomiting returned, the injection with the laudanum was repeated, and continued as long as the symptoms required. The event of this mode of management, he says, was the recovery of a greater proportion of the sick, than by any other practice;—and I think it very likely to be true."

MS. letter from Dr. Mitchell.

different parts of the United States, for many diseases. I have occasionally used it with great success, particularly where the stomach has rejected every other medicine. I have never known it to fail to check vomiting under any circumstances, when all other means have failed. The original recipe contained nitric acid, but I have substituted the *muriatic*, which I think is better. This mixture may be occasionally repeated. It possesses antiseptic and refrigerant, or cooling properties.

The Skin.—It is inconceivably important to attend to the skin. The dry, hot, and parched state of the skin points out the necessity of promoting perspiration. An infusion of *boneset*, drank very freely, has an admirable effect by promoting sweating. A quart may be drank in the shortest space of time. This infusion appears to act upon all the excretions, and we have some well authenticated cases of its having performed a perfect cure in yellow fever, without any other medicine, except the addition of a little brandy. Should this alone fail of producing perspiration, a teaspoonful of

The Sudorific or Sweating Drops

may be taken, till free perspiration is produced. When the stomach becomes no longer able to bear it, or should they cause too much sickness, *cold water*, except when there is great perspiration, and *cream of tartar* water may be taken; also, *lemonade*, *infusions of mint*, *catnip*, *balm*, &c.

The Surface.—The whole surface of the body, as early as possible, must be thoroughly bathed with weak ley, every two hours through the day and night, if the patient does not sleep, or as often as the fever increases. This will have a remarkable effect in allaying the febrile excitement. The transition from pain to relief, by this application, is truly surprising, not only in this, but all febrile diseases.

The Feet.—It is equally as important to bathe the feet, morning and night. This equalizes the circulation, and thereby prevents a determination of blood to the head, and local congestions. If the patient cannot rise from his bed, it may be done in a recumbent position.

The Abdomen.—Oftentimes the abdomen is tender, and becomes swollen from the irritation of the intestines. When this is the case, apply warm fomentations to it. *Hops* and *wormwood* boiled in vinegar and inclosed in a flannel bag, must be applied to it.

The Head.—If there is great determination to the head, delirium, &c. a towel may be dipped in a mixture of *spirits*, *vinegar*, and *water*, to which has been added a little *salt*.

Anodynes.—Anodynes may be given if the patient is very restless and unable to sleep. Fifteen grains of

The Diaphoretic Powders

must be given night and morning, and repeated every two hours, if the pain is not removed or sleep procured. The ordinary effects of opium is prevented by this peculiar compound. It induces sleep without increasing the fever; but its diaphoretic properties lessen it.

Antiseptics.—In a great tendency to putrescency, yeast may be freely given, as much as the stomach will bear. It may be mixed with a little

milk and molasses. If there is great prostration and sinking, wine may be drank mixed with water, and given warm.

Cold Affusion.—Should the fever prove refractory under this treatment, or should it not readily yield, the cold affusion must be used. The whole body must be repeatedly and thoroughly bathed with cold water until the fever abates.

Give internally, if there remains any irritability of the stomach, and great thirst, the following liquid:

Take Sal Aratus, (*bi-carbonas potassæ*,) a teaspoonful, (1 dram.)

Mint water, 8 oz. Mix.

Give a table spoonful every three hours through the day.

This alkaline liquid will allay the irritability of the stomach, correct the putrid state of the fluids, and act favourably on the skin, and is admirably calculated to neutralize the acidity and poison in the stomach and intestines.

Cream of Tartar whey is a very valuable drink, and which may be occasionally taken.

Boneset is also a very valuable remedy in yellow fever. A Mr. Gilbert Fowler of this city was attacked with this fever in the year 1805, and the only medicine that he took was the following:

A strong decoction of *Boneset*, two quarts.

French Brandy, half a pint.

The whole to be taken as soon as possible, and as warm. This from its action upon all the excretions, stomach, skin, &c. soon arrested the disease, and he recovered.

Mr. David Whitehead of this city, in the year 1794, while the yellow fever raged here, was attacked with the disease, and having been told of the salutary effects of the *boneset*, he commenced taking a strong decoction of it, with the addition of *Virginia snake-root*. In fifteen or twenty minutes, he drank two quarts of the tea, and such was the effect upon the system that it cut short the fever at once.

Thus it seems that simple *plants* are very effectual in removing even the most formidable diseases; but in these days of popularity, error and prejudice, they are despised, rejected, and trampled under foot. This very plant just mentioned was likewise found of singular efficacy in a remittent or intermittent fever which prevailed during the American war among the soldiers. The physician of the regiment, or the nurse, I know not which, went into the meadow, and collected a large quantity of the *thoroughwort* or *boneset*, and put it into a large iron kettle, boiled it until it became a strong decoction, and then administered it to all that were sick with the fever. The consequence was that the whole of the sick recovered rapidly, and in the most surprising manner. It also had an astonishing effect in the remittent fever, which prevailed in another section of the country.

There are numerous other authorities, to prove the superiority of the vegetable, over the mineral practice.

Dr. Hosack states in a letter to the Mayor of New-York, on the yellow fever, that however humbling it is to the pride of medical science,

a certain quaker of this city cured more patients by giving *catnip tea* and *castor oil*, than the rest of the faculty!!*

Cold Water.—The patient may also in this disease take cold water. It is not only very refreshing, but diminishes the fever, and is a valuable auxiliary in curing the disease. I know a man in this city who was in the most hopeless condition with yellow fever, and who was forbid by his physician to taste any cold water, procure it in a clandestine manner and drank it very freely, which caused perspiration and removed the fever in a very short space of time, without any other medicine. Nature in such cases seems to point out the cure.

In concluding this section on the treatment of yellow fever, I will partly recapitulate.

First.—Negatively.—Be careful not to administer a particle of *mercury*. It is almost as dangerous as the disease itself. Abstain from *bleeding*. It will hasten the disease by the debility which it induces.

Second.—Positively.—The treatment in this disease must be very prompt and energetic. The whole secret of curing it, depends upon the means made use of, to open all the excretions, and that as soon as possible before the stage of collapse or prostration ensues; and all this is effected in a similar manner as it is in other types of fever, with this difference, that the treatment must be more active.

There are three principal things to be relied upon in arresting this disease.

1. **Cathartics.**—I find none so good in this as well as in most febrile diseases, as that which I have before recommended, viz.

Jalap, pulv. one part.

Senna, do. two parts.

Cream of Tartar, one part. Mix.

A large teaspoonful to be given every two hours until free purging takes place; to be repeated once or twice a day, in the commencement.

2. **Sudorific, or Sweating Medicine.**—The *sudorific*, or *sweating drops* must be administered, a large teaspoonful at a dose, every hour, till free and copious perspiration ensues; to be given in half a pint of *catnip tea*, and to be kept up during the fever. After which let an infusion of *boneset* be drank warm. Should these drops at any time prove too stimulating, substitute the *diaphoretic powders*.

A very skilful French physician who practised many years ago in Philadelphia, was in the habit of saying, that as soon as he got his patients (afflicted with this fever,) into a free perspiration, he pronounced them out of danger.

* Allow me to add this truth, however humiliating it may be to the pride of science, and I mention it in confirmation of the good effects of this comparatively mild treatment, that, in the yellow fever of 1798, under the direction of Richardson Underhill, a member of the Society of Friends, who like another Howard, volunteered his services to the poor, on that memorable occasion, a greater proportion of persons ill of that disease, were cured by means of *Castor Oil and Catnip*, than by those more active prescriptions employed by many of the physicians of our city. With the hope, that these suggestions may be useful, I am, Dear Sir, &c.

DAVID HOSACK.

Since writing the preceding, I have been favoured with a small treatise upon the nature and cause of yellow fever, in which my views are further confirmed. The writer thus remarks:

“On the subject of remedy, permit me to state, from undoubted information, that, in most parts of the West Indies, there are now regular bred nurses, who take with them their large bathing tubs, and first immerge their patients in a warm bath; rubbing them with cloths, squeezing over them warmed lime and lemon juice, and causing them to drink plentifully of lemonade and other diluting drinks. If a perspiration succeed, they clap their hands in signs of safety. They also administer emetics and gentle purges if necessary. This “*sudorific*” practice seldom fails of cure, if the *golden moment* be not lost, and if applied immediately on the first attack of cold chills, and before the mucus begins to form in the stomach, and external fever sets in, which is about the second or third day. As this said mucus or phlegm accumulates, through the body into the stomach, after a check of the perspiration, the fever, as a contracting effect, increases in its struggle to relieve the patient.

These West Indians have no terrors of *contagion*; they neither speak of, nor heed its importation, or exportation; they know its *true cause*, and call yellow fever the highest grade of indigenous bilious fevers amongst them. They have already, in most of the Islands, rendered its effect mild and manageable to a great extent, among themselves, and may, by this simple practice, “*within reach of every body*,” ultimately neutralize its consequences, perhaps to its final melioration.

That I may be fully understood, I beg leave to explain my own simple view of this *said check* of the perspiration, now so little regarded.

Our bodies are externally covered with a kind of net-work, called skin; consisting of innumerable *pores*, which expand with heat, and contract with cold. In perfect health these nerves emit a constant *insensible* fluid or steam, and when the body is agitated, appears in a visible sweat. Through these pores, by far the greater portion of our food is discharged. When sudden cold seizes on a healthy body, these nerves experience shivering, and chills, which draw them shut, and the fluids cease to be discharged through them *externally*. This I apprehend to be a check of the perspiration, and may be more or less general over the whole body. Its effect, also, is the precise manner in which yellow fever begins, viz. with chills. It is then, *kind nature* instantly commences the work of relief through a reaction of internal heat, or fever. To effect this, the blood is set in rapid motion through the body; and the pulse, from its natural beat of about seventy-five, is made to strike more than one hundred times in a minute. This heat or fever, in the order of nature, reacts, with all its power on the external cold “*infection*,” and a perspiration is thereby frequently forced, on bodies in previous good health, by the mere rapid motion of the blood, without any other aid than this increase of nature’s fever heat. If the warm drinks, and bathing practice, as above stated, be instantly applied, on the first attack of cold, nature receives a powerful auxiliary (in her own way, through an external and internal heat,) towards an increased motion of the blood; and if a profuse sweat be the consequence, nine times out of ten, the pores open and assume their functions, and the patient is relieved in a few days. If an attack of cold, in this season of the year be

a *relapse*, on bodies previously unwell, and the efforts to produce perspiration fail, the heat, or fever, puts on an alarming *external* appearance, on or about the second or third day; and continues to act with a proportionate, though natural and necessary vigor, towards a restoration. In these extremities we are most inclined to tamper with the patient, who ought not to be otherwise acted upon, until the paroxysm of fever shall abate. To practice on this fever as a *cause*, in my view of it, is *death*; to treat it as a friend, is life!

A fever pervades animated nature, and almost instantly follows diseases of every kind. It is then, an *effect*, not a *cause*; a *remedy*, not a *disease*, and ought to be promoted as a *friend* to *destroy* an *enemy*, WHEN ITSELF WILL DISAPPEAR! It is nature's restorative. The medical practitioner is rarely called until the second stage of diseases,—he finds the patient in high fever; “pestilential yellow fever” is declared! In 1793–95 and 98,—(and as the young practitioner had been taught to practice,) in went the lancet, down went the calomel and jalap, all to *kill the fever*, treating it as a *cause*.—The fever is lessened, and the patient lapses in a *stupor*.—Again, the fever (deemed to be the dire enemy) rouses the patient for life, into action;—other “copious bleedings were then had, and purges repeated” to the entire emptiness of the body of its blood, and the bowels of their sustenance! The fever is broken. The patient becomes cool and easy; is not emaciated, conceits himself well, walks erect, at flighty intervals, though in a general *stupor*, THROUGH WANT OF FEVER, and dies apparently cool and WITHOUT FEVER!

The great danger, in all diseases, is the application of too much art, interrupting the efforts of nature.*

If the “sudorific” practice shall prevail, it is confidently believed, that our fall fevers will be rendered mild, as they are daily becoming in the West Indies, from a true knowledge of their causes and management. Nature will then be studied, by our physicians, in her *health*, and her *diseases*, on the broad basis of her elements, in every climate, and especially in our own. Disputations about non-entities will then be heard of no more, at least among the real students of nature, and particularly those of the Medical Faculty.”

3. *The Surface*.—The whole surface from the neck to the feet must be drenched, and effectually rubbed and bathed with strong leached ley water, used sometimes tepid and sometimes cold, as it may most diminish febrile excitement.

These and the auxiliary means recommended in the preceding chapter, will be found a very superior and sovereign remedy for the yellow fever, called in any reasonable time.

REGIMEN.

Diet in this fever is almost out of the question, as patients seldom can eat any thing; but should the patient desire it, he may take a little pa-

* This is declared of George Washington, the Father of his Country; who is believed to have sunk into premature death by this practice of bleeding so repeatedly performed on him. It is believed that thousands have since fallen by like practice; and millions may yet fall from a misapplication, and disregard of the only true means of relief, through a multiplicity of frivolous and false hypothesis.

nado, indian-meal gruel, or barley water. A very grateful and nourishing drink is made by toasting bread very brown, and soaking it in water and then drinking it. It is good for the nausea; is cooling and nourishing. For a change, *lemonade*, *currant jelly*, *tamarind* and *apple water* may be drank. *Buttermilk*, moderately acid, and mixed with water, is very refrigerant. *Vegetable acids* of all kinds, is very agreeable to the patient, and is very antiseptic.

Cool Air.—Cool air is as necessary to the patient as medicine. The room must be kept clean and well ventilated by opening the windows, removing the bed curtains, and placing the bed, when practicable, in the middle of the room. Vinegar and water applied to the head, on a cloth or napkin, lessens the pain and heat of it, and thus affords great relief by rendering the intellects clearer, and lessening delirium. Washing the face, hands, and feet often, with the same liquid, will prove equally serviceable and refreshing.

Quietude.—Company, noise, and conversation must be avoided. As much encouragement must be held out to the patient as the symptoms will warrant; but never, no never, deceive or flatter him by creating false hopes of recovery. Any physician who is guilty of this, is answerable to his Conscience, and to the Bar of God.

A young man, whose veracity can be relied upon, states that during his residence in New-Orleans, he with two others was seized with the yellow fever, and his case was pronounced hopeless. He had an irresistible desire for cold water, which was denied him; one night, in the absence of his nurse he reached a basin of soap-suds, and such was his intolerable thirst, that he greedily drank it. The consequence was a free perspiration, a remission of the symptoms, convalescence, and recovery; while the other two, affected with the same fever, died. May we not draw a practical inference from this fact:

1. That nature often in this manner points out the cure, and we ought therefore to be always careful to watch, and follow her dictates.

2. We may also learn from this fact, as well as numerous others, the *anti-febrile* properties of water.

3. We may also infer that the soap which was mixed with the water might have contributed to the cure, and therefore may contain great medicinal properties.

MORAL REFLECTIONS.

“What striking instances of the transitory nature of life, does such a disease afford! We see men exulting in the bloom of youth and prime of health and strength, in three or four days numbered with the dead. Our gayest companions, our most amiable friends, in less than a week, are laid in the dust. When we have been daily witnessing these scenes around us, who can avoid reflecting, that *his turn may be next*; yet the mind, when habituated to the most afflictive and extraordinary events, becomes hardened and views them with indifference. Disease and death, the most dreadful accidents which can affect the human frame, when made familiar to the sight, cease to inspire dread and are ranked with the most common occurrences.”

SECTION IV.

SPOTTED FEVER. (*Typhus Petechialis.*)

DESCRIPTION.

"Perhaps there is no disease," says Hand, "which so soon makes the tongue to falter, the knees to totter, locks up the senses, alienates the mind, and with unconquerable weakness saps the very basis of our life, as spotted fever. It is not confined to any season, and it has not been observed to choose any peculiar aspect or atmosphere, but visiting in turn the bleak ridge, and the banks of the clear stream.

This very formidable disease made its first appearance in our country in the town of Medfield, Massachusetts, in the year 1806. Subsequently to that period, it has occasionally been recognized as an epidemic in various parts of the New England states, in the state of New-York, and on the borders of Canada. In 1810 it prevailed with mortal rage in Worcester, Massachusetts, and in the autumn of 1812 and winter of 1813, the same or distinct epidemic visited the army of the United States, stationed at Greenbush, and at various other situations, where its destroying power has scarcely been exceeded by military slaughter. It was prevalent also, in Connecticut and Vermont, and a considerable number of fatal cases occurred likewise in Boston, both among the inhabitants and the soldiers quartered in that metropolis. It has usually occurred during the cold weather of winter and spring, and its continuance has been protracted in some seasons to May and June, chiefly in the interior of the country.

CAUSES.

We have never heard any cause assigned for this fever; but it would appear that it arises from a peculiar morbid state of the atmosphere, engendering some specific virus, or poison different from any other. The paleness of the surface which sometimes attends the disease, and the partial or total want of reaction, show that the blood is forcibly and powerfully driven from the surface to the internal organs. The congestion, or accumulation of blood is sometimes so great, that the heart and arteries are incapable of exerting the least power to counteract the cause of the disease. Hence they sink immediately under its withering influence. Dissections demonstrate a morbid state of the heart and lungs with their contiguous membranes.

SYMPTOMS.

Though the leading features of this enemy are always the same, yet his dress is endlessly varied.

To enumerate symptoms:—Some patients are seized with violent pains in the stomach, head, joints, limbs; and frequently the pain is confined to a single point; often to a single toe or finger. Some have a violent ague and shaking, and yet are not not sensible of cold; and some have no heat. Some were taken suddenly, totally blind, or im-

penetrably deaf; others were not affected at all in those organs. A palsy of a member was not unfrequent, and a strange numbness was felt in the nose and face of some, which led them to be rubbing their face, and that for hours. Some had raving or furious delirium, others a playful or hysteric alienation of mind, while others were more shrewd than before. Some were conscious of their sinking, yet seemed not to mind it. Some fell into a snoring lethargic sleep, from which nothing would rouse them. Some were so painfully sensible as to complain of the slightest touch or motion, while others felt not the pricks of needles, nor yet the contact of living coals.

Dr. Miner, of Middletown, (Conn.) said in some cases the stomach was perfectly torpid like a leather bag; the most powerful stimulants conveyed into it, did no good; while in others, there was dreadful gastric (stomach) irritability, immediately ejecting every thing swallowed. The pulse was commonly feeble, frequent, irregular and often interrupted. In some cases it seemed inflated, yet would disappear upon the slightest pressure. Sometimes when the pulse was gone in the wrist, the arteries of the neck would be seen beating with seemingly impatient and fretful motion.

Bleedings were frequent from different parts of the body, and often fatal. Purple spots appeared in some, from oozing of blood from the relaxed vessels of the true skin, yet without sufficient force to penetrate or elevate the scarf skin, and spreading to various sizes, from a point, to that of a shilling; and assuming different hues from scarlet to black. In this disease, however, there are often no spots nor fever at all, and the patient is in many cases dead before fever could form.

From the onset, a clay-like coldness came over the whole system, and all efforts to restore genial warmth were frequently unavailing. The tongue was in some cases clear and moist, in others dry, in others bloodless; in the progress of the disease it commonly turns brown or black. The swallowing was often difficult from canker in the throat, or from palsy of the parts. *Nausea* and vomiting commonly harrassed the patient from first to last; *yet the contents of the stomach were not at all vitiated*. The bowels seldom suffered at all. A horrid sensation of cold was felt in the stomach as if ice was melting there; this symptom, as well as that of puking, was greatly aggravated by drinking cold water on any weak beverage. Patients who inquired for water could not distinguish it from brandy.

Dr. Wolcott states the case of a medical gentleman, a relative of his, who was suddenly seized with strong, fixed pain in his shoulder. The patient undertook to open a vein in his arm, but the blood was so stagnated that it would not flow. The patient and his friends became alarmed, and sent for a council of physicians, who arrived in time to investigate his case. The pain in the shoulder still increasing, became terribly severe, and he screamed aloud. 'Gentlemen,' said the patient to the physicians 'what do you think of my case? I request you to speak without reserve, and name, if you can, my disorder. Do not hesitate to tell me whether you think I can or cannot survive. I beseech you do not deceive me. I wish to know the worst.' 'Doctor,' said the physicians, 'we would not give you unseasonable alarm, but as you have

requested us to express our opinion, we, as in duty bound, must tell you that we think your disease very nearly resembles (if it is not identified with) the spotted fever, and that your case is desperate.'

'Give me opium,' said the patient, 'the pain is intolerable, I cannot bear it.' Opium, in substance, was, accordingly, immediately administered, of which he took in a short time, a piece, as large as a butternut, but without any alleviation of the pain. At length he swooned away, and sunk into the arms of death, in sixteen hours from the first attack. During the whole of the tragic scene, the pain was constantly fixed in the shoulder. His body was not opened, but the shoulder, after death, exhibited a gangrenous (black and blue) appearance.

The invasion of the disease is generally sudden and violent. The patient is seized in the midst of his usual labor, and oftentimes is struck down suddenly almost as by a stroke of lightning.

COMMON TREATMENT.

Bleeding, sulphate of copper, turpeth mineral, calomel and jalap, squills, antimony, arsenic, blisters on the head and other parts.

REFORMED PRACTICE.

Indications of Cure.—The indications of cure in this disease, are, First, to recall the blood from the internal parts to the surface of the body, by promoting perspiration. Second, to remove urgent symptoms. Third, to sustain the sinking powers of life.

The whole history and symptoms of spotted fever show the absolute necessity of administering such medicines as will cause a copious perspiration.

The means recommended under the other types of fever may be used in this, but given oftener and in greater doses; in conjunction with which the vapour or hot bath may be used. Dr. Miner, who had considerable experience in this disease, says, that not only a warm, but a hot bath should be used. An infusion of the *boneset* or *thoroughwort* is highly recommended. A small quantity of brandy may be added, and taken as warm and as often as possible.

Purgatives should be daily given, and when the patient is in great distress, twenty grains of

The Diaphoretic Powders,

may be repeated every two hours. In clay-like coldness of the surface, let it be thoroughly bathed with *capsicum* (*cayenne pepper*) and *brandy* in suitable proportions, simmered and applied as warm as the patient can bear it. A teaspoonful of the pepper may be given internally in a tumbler of *mint tea* every hour or two until warmth of the system is restored or reaction takes place. The feet must be frequently bathed, in warm or hot water. When the head is much affected, tepid water may be applied to the temples and forehead. *Sinapisms* may also be applied to the feet. If there is pain and oppression at the chest, warm applications may be applied to it. Infusions of *snake-root*, *chamomile*, *catnip*, *balm*, &c. may likewise be given. Should the violence of the disease be directed to the bowels, fomentations of hops and vinegar may be ap-

plied. Give also injections. If there is much retching and vomiting, give small quantities of brandy and essence of peppermint, mixed. If this should not stop the retching, let the mixture be given as recommended for vomiting under yellow fever.

If great sinking comes on in the course of the disease, give a wine glass of yeast every two hours, also wine or porter.

Dr. Hand says:—"Under this view of the subject, we see what "must decide when Doctors disagree," the cases giving laws to the prescriber, and the symptoms pointing with iron index, to the only means which can save the patient from sinking, viz. *cordial stimulating medicine and nourishing diet*. The pressure of the disease, and the remaining strength, must determine the kind and quantity of means; and the range is between going into a warm bed, with drinking *pennyroyal*, *horsemint*, *spearmint*, or *peppermint tea*, and hot bath, with *brandy*, *laudanum*, *ether*, &c.

Begin the treatment by putting the patient into a warm bath, apply flannels wrung out of hot water, or bladders of hot water to the sides and feet of the patient. If the disease be more than slight, give to drink hot wine whey, milk punch, or warm wine and water. If obstinate nausea or puking attend, give *hot brandy*, a spoonful at a time, with only water enough to keep it from strangling; put a *capsicum* and a *mustard plaster* over the stomach. If lethargic symptoms come on, apply the same on the nape of the neck, and increase all the stimulants.

If the warmth and moisture return, and the pulse is raised, there is hope; yet the patient must be kept up, and the disease kept at bay, by anodynes, in full portions every two or three hours, *essence of peppermint*, *spearmint*, &c.

Dr. Anthony Hunn, of Kentucky, who had considerable experience in this complaint, cured every case by plunging his patients immediately into a hot bath.

The whole indication of cure in this disease is to bring on reaction, to recall the poison which is mixed with the blood and thrown to the centre, which can only be done by inducing a copious perspiration in the most prompt and energetic manner.

If I mistake not, where sweating was produced in this complaint, recovery invariably followed, while bleeding, mercury, &c. only aggravated it.

The *sweating* or *sudorific drops*, then, given freely, and bathing the surface repeatedly, with *capsicum* or *cayenne pepper*, with spirits or brandy simmered a few minutes together, and applied over the whole surface as hot and as often as possible, together with bathing the feet, the hot bath and an infusion of *peppermint* given as warm as can be drank, constitute the principal remedies in this type of fever.

CHAPTER VI.

SCARLET FEVER. (*Scarlatina*.)

DESCRIPTION.

THE scarlet fever is so denominated from the scarlet colour, and eruptions which appear on the body. It occurs at all seasons of the year, but generally in the fall, or beginning of winter. It often seizes whole families, but children and young persons are more subject to it. It is divided into three principal kinds. Simple *scarlatina*, when the throat is not affected; *scarlatina anginosa*, when the throat is affected; when accompanied with symptoms of putrescency and malignancy, it is called *scarlatina maligna*. The two latter kinds are generally blended together. There has been a dispute whether the scarlet fever, and malignant sore throat are the same diseases, or only a variety of the same. 'It is now pretty generally admitted,' says a writer, 'that the scarlet fever in all its forms, as well as putrid sore throat (*cynanche maligna*) is produced by the same specific contagion.'

CAUSES.

Scarlet fever arises from a specific contagious effluvia.

This disease is seldom, if ever taken the second time. There are some instances on record of the fact, that in this type of fever as in many others, some individuals are rendered unsusceptible of its contagion.

Gregory states that there is abundant evidence that fever attended with scarlet eruption, and possessing all the other characters of this disease, does occasionally arise from exposure to cold. The cause or contagion of scarlet fever will remain in one place for several years; a few individuals becoming from time to time affected with it.

"This disease," says Thatcher, "has long been considered as highly contagious, spreading epidemically through villages and districts, with an alarming degree of mortality. In the years 1735 and '36 it prevailed extensively throughout our country in its most malignant form, and it was estimated that in Massachusetts about one thousand persons became its victims.* It is recorded that in 1741, '46, and '60, the disease, termed *anginosa maligna*, or the putrid and ulcerated sore throat, prevailed and extended through the colonies with mortal rage, in opposition to the united endeavours of the faculty. It swept all be-

* Dr. William Douglas, a respectable physician of Boston at that day, published a valuable practical essay on the *anginosa ulcerculosa*, which prevailed in New-England in 1735 and '36, in which he detailed the characteristics of the disease, and the method of treatment. He says, "most of those who died of the physician, died by immoderate evacuations." It has been related by tradition, that the physicians of that day, or of some other period, adopted the plan of bleeding from the vein under the tongue, and although in almost all instances it proved fatal, the practice was persisted in longer than could have been deemed warrantable.

fore it, and some villages were almost depopulated. It appeared again in 1784, and spread through the New-England States; at subsequent periods it has been recognized either as an epidemic, or as sporadic cases, without assuming in a high degree characteristic contagious powers. Scarlatina, in all its forms, is produced by the same specific contagion; and frequently the symptoms are so blended in the first onset, that the particular species can scarcely be designated. It may be communicated by the contaminated atmosphere, and by simple contact of the patient, either in the heat of summer or cold of winter; but it most frequently occurs in autumn, and becomes a very prevalent epidemic, often continuing through the summer months. It frequently attacks young people in the most sequestered situation, where communication with the sick had been impossible, appearing in some families and passing others contiguously situated. It produces its operation on the system about the fourth or fifth day after exposure to the contagion, and it not unfrequently happens that persons exposed escape the disease, as in other contagions, although in general persons are not susceptible of a second attack, some instances to the contrary have undoubtedly occurred. Children and persons of weak lax habit are most commonly the subjects of this disease. In its mildest form it is known as the *simple scarlet fever*, receiving its name from the singular colour which pervades the skin, resembling the shell of a boiled lobster, or appearing as if diffused with red wine."

SYMPTOMS.

The *scarlet fever* commences with a chill and shivering, like other kinds of fever, with nausea and often vomiting, great sickness succeeded by heat, thirst, and headache; sometimes in a very mild degree, at others more violent. The pulse is accelerated, the breathing is frequent or interrupted, the eyes red, and eye-lids swollen. In two or three days the flesh begins to swell, a pricking sensation is experienced, and an eruption appears on the body in the form of a red stain or blotch, or rather of a *fiery redness*. It usually appears first upon the face, breast, and arms, then over the whole body, of a uniform red colour. In about three days a gentle perspiration takes place; the effervescence or eruptions disappear; the cuticle peels off, and there remains a kind of branny scales dispersed over the whole body, which sometimes reappears two or three times.

The scarlet fever may be distinguished from the *measles*, by the eruptions of the former (*scarlatina*) being more of a fiery redness, and diffused over the whole body, and not as in measles in distinct spots, nor is it accompanied with any cough, a weeping or watering of the eyes, and the efflorescence of the measles does not appear, till about two days later than scarlet fever. Where the disease appears in the simplest form there is little required from art; a simple course of treatment soon removes it.

SCARLATINA ANGINOSA, (*Affecting the Throat.*)

Scarlatina anginosa, in several instances, approaches very near to the malignant form. The patient is seized not only with a coldness and

shivering, but likewise with great languor, debility, and sickness, succeeded by heat, nausea, vomiting of bilious matter, soreness of the throat, inflammation, and ulceration in the tonsils, &c. a frequent and laborious breathing, and a quick and small depressed pulse. When the efflorescence appears, which is usually on the third day, it brings no relief; on the contrary, the symptoms are much aggravated, and fresh ones arise.

In the progress of the disease, one universal redness, unattended, however, by any pustular eruption, pervades the face, body, and limbs, which parts appear somewhat swollen. The eyes and nostrils partake likewise more or less of the redness, and, in proportion as the former have an inflamed appearance, so does the tendency to delirium prevail.

On the first attack, the fauces are often much inflamed; but this is usually soon succeeded by grayish sloughs, which give the parts a speckled appearance, and render the breath more or less fetid. The patient is often cut off in a few days: and even if he recovered, it will be by slow degrees; dropsical swellings, or tumours of the parotid, and other glands, slowly suppurating, being very apt to follow.

"The patient," says an author, "complains of a stiffness in the neck, with acute pain in the back of the head. The throat is sore and inflamed, exhibiting a shining redness of a deeper colour than in common inflammatory sore throat, and interspersed with pale or ash coloured spots. In many cases the affection of the throat is among the first symptoms, a dark red line extending along the velum pendulum palati, and lower part of the uvula. The breath is highly offensive, the tongue is covered with a yellow mucus or thick brown fur, and the inside of the lips is beset with vesicles containing an acrid matter, which excoriates the corners of the mouth and other parts. In the progress of the disease, the inside of the nose becomes red and inflamed, and a thin acrid matter issues from the nostrils which corrodes the skin wherever applied."

SCARLATINA MALIGNA, (*Malignant Species.*)

"This," says Dr. Thatcher, "is the cynanche maligna of Cullen, the ulcerated or putrid sore throat of Huxham and other authors. This form of the disease has several symptoms in common with scarlatina anginosa. It comes on with rigors, dejection of spirits, pain in the head and back, giddiness, vomiting, and much general oppression. The eruption comes out in blotches, or small points scattered over the body and extremities of a dark purplish or livid hue. The fever is intense and progresses with rapidity, but manifesting an exacerbation in the evening and slight remission in the morning. The pulse is small, indistinct and irregular. There is a very great determination of blood to the brain, producing redness of the eyes, intolerance of light, throbbing, pain of the head, and delirium or coma. The whole neck sometimes swells and assumes a dark red colour. It sometimes happens that cynanche maligna appears without any affection or efflorescence of the skin, as scarlatina in some cases presents itself without any ulceration of the throat. As the sloughs about the fauces spread, they generally

become of a darker colour, the whole internal fauces are at length covered with thick sloughs, which when they fall off, discover ulcers very deeply seated, and the parts appear quite black, and the sloughs often extend throughout the whole of the alimentary canal. The eruption sometimes suddenly recedes, an alarming train of symptoms ensue, as also when the eruption suddenly assumes a very pale and livid appearance. The symptoms called putrid and malignant are now conspicuous, a dissolved state of the blood is indicated by inky petechiæ, oozings of black gore from the nostrils, gangrenous appearances of the throat, spots upon the skin, and hæmorrhages from various parts of the body. Cynanche maligna generally arrives at its height about the fifth or sixth day, but in some fatal cases the scene closes as early as on the third day. The inflammation, as in cynanche tonsillaris, on some occasions affects the eustachian tube, producing ulceration in the internal ear, and often extending to the parotid maxillary and other glands of the fauces, which become swelled and painful. The malignant or putrid sore throat may be distinguished from the inflammatory, by the looseness and vomiting; the puffy and dark coloured redness attending the swelling, and by the fetid ulcers of the throat, covered with white or ash coloured sloughs. It may also be distinguished by the slight delirium appearing early in the disease; and by the sudden weakness with which the patient was seized.

PROGNOSIS.

When scarlatina is to terminate in health, the fiery redness abates gradually, and is succeeded by a brown colour, the skin becomes rough, and peels off in small scales, the tumefaction subsides, and health is gradually restored. On the contrary, when it is to terminate fatally, the febrile symptoms run very high from the first of its attack, the skin is intensely hot and dry, the pulse is very frequent but small, great thirst prevails, the breath is very fetid, the efflorescence makes its appearance on the second day, or sooner, and about the third or fourth is probably interspersed with large livid spots; and a high degree of delirium ensuing, or hæmorrhages breaking out, the patient is cut off about the sixth or eighth day. In some cases a severe purging arises, which never fails to prove fatal. Some, again, where the symptoms do not run so high, instead of recovering, as is usual, about the time the skin begins to regain its natural colour, become dropsical, fall into a kind of lingering way, and are carried off in the course of a few weeks.

Scarlatina, in its inflammatory form, is not usually attended with danger, although a considerable degree of delirium sometimes prevails for a day or two; but when it partakes much of the malignant character, or degenerates into typhus putrida, which it is apt to do, it often proves fatal.

DISSECTION.

On dissection of those who die of this disease, the fauces are inflamed, suppurated, and gangrenous; and the trachea and larynx are likewise in a state of inflammation, and lined with a viscid fetid matter. In many instances the inflammatory affection extends to the lungs them-

selves. Large swellings of the lymphatic glands about the neck, occasioned by an absorption of the acrid matter poured out in the fauces, are now and then to be found. The same morbid appearances which are to be met with in putrid fever, present themselves in other parts of the body.

COMMON TREATMENT.

Mercury, bleeding, antimony, &c.

REFORMED PRACTICE.

Indications of Cure.—From the appearance of the eruptions on the skin, soon after the commencement of the disease, it is very evident that this fever is produced by some morbid matter, taken into the circulation through the medium of the lungs, and that the increased action in the system, is a healthy effort of nature to throw off such humours or morbid matter. It is therefore our duty to aid nature in her salutary efforts. If unable to expel the irritating cause from the system, she must be assisted by *sudorifics*, or sweating medicine. If her struggles are too great, by which too much inflammation is produced, she must then be restrained or moderated.

Emetics.—Emetics will be found very useful in the commencement of the fever. Those heretofore prescribed in other types of fever, may be administered. None will have a better effect than pulverized *ipecac* and *lobelia* given in suitable doses, according to the age of the patient. It is not always necessary, however, to give them; but if there is soreness of the throat, and an accumulation of mucus impeding respiration, a mild emetic will have a beneficial effect. When given in the forming stage of the disease, or at a very early period, they abate the febrile symptoms, and render the subsequent effects of the fever less violent, and in some cases cure the disease, or render it extremely light. Withering recommends them throughout the whole course of the fever. But the best effects arise from their use in the early stages of it. One great effect derived from emetics in febrile diseases, is the sympathetic action they exert upon the capillary system. The connection which exists between the stomach and skin is so great that if a healthy action is exerted upon one, the other experiences a correspondent good effect. They appear to overcome that tension and stricture which exists in the pores of the skin, by their stimulating effects upon the cutaneous exhalents.

Purgatives.—Purgatives in this fever, as well as others, are highly useful. Hamilton on purgative medicines speaks of their utility in scarlet fever in the highest terms. They moderate arterial action, relieve the pain in the head, and prevent delirium, and remove the morbid state of the liver, stomach, and whole alimentary canal. It must be borne in mind, however, that there is a great difference in purgatives; some pass through the stomach and bowels without carrying away or removing any feculent matter, or altering the condition of the mucous membrane. In general, castor-oil and salts may be mentioned among this class of purgatives. No kind will be found so useful as the

Common Purgative.

A teaspoonful of this powder to be put in a teacup, or tumbler, with a lump

of sugar sufficient to sweeten, then add a gill of boiling water or *mint* tea. An adult will take the whole of it when cool; but it must be recollected that children among whom scarlatina more generally prevails, must take a dose proportioned to their age. This thoroughly cleanses the stomach and bowels, and invariably benefits the patient. It may be repeated every other morning, or at farthest every third morning.

"I think," says an old and experienced physician, "the opinion gains ground, that purgatives are useful in scarlatina. Many years ago, when the prejudices against them were more prevalent than they are at this time, I ventured to employ them. My doing so was, indeed, a necessary consequence of the benefit I had experienced from purgative medicines in typhus. I had learned, that the symptoms of debility which take place in typhus fever, so far from being increased, were obviously relieved by the evacuation of the bowels. I was, therefore, under little apprehensions from them in scarlatina; and I have never, in a long course of experience, witnessed sinking and fainting, as mentioned by some authors, and so much dreaded by them; neither have I observed revulsion from the surface of the body, and consequent premature fading, or, in common language, striking in of the efflorescence, from the exhibition of purgatives. Accordingly, in treating scarlatina, I have confided much in the use of purgative medicines; and no variety of the disease, as appearing in different epidemics, or in the course of the same epidemic, has hitherto prevented me from following out this practice to the extent which I have found necessary.

I have observed the pungent heat of surface, violent head-ache, turgescence of features, flushing of countenance, and full and quick pulse, the earliest symptoms in some epidemics of scarlatina, and which may have suggested and warranted the practice of blood-letting to be quickly subdued by one or two brisk purgatives. Full purging is not required in the subsequent periods of the disease, in which the sole object is to remedy the impaired action of the intestines; to secure the complete and regular expulsion of their contents; and thus to prevent the accumulation of fæces, which never fails to aggravate the symptoms, and to prove the source of farther suffering to the patient.

It is generally, I believe, admitted, that purgative medicines are useful in removing dropsical swellings, the consequence of scarlatina, and are given with this view towards the decline of the disease, when the weakness of the patient is often very great. I conceive that purgatives also afford a mean of preventing this swelling, and other derangements of health; and for this reason I give purgatives during the fever, when the strength is not altogether broke down, and for some time after convalescence has commenced.

In scarlatina, as in typhus, we should keep in view the procuring the effect of purgatives during the day, and the avoiding, in this manner, the disturbance of the sick in the night-time. It is of moment to examine the fæces, to ascertain their state and their quantity, circumstances necessary to determine the subsequent dose of the purgative, and the frequency of its exhibition.

The use of purgative medicines in scarlatina does not supersede the other sources of relief and comfort, which have been found proper in

the treatment of the disease, and which our patients, or their friends and attendants, may expect, and which the habits of practitioners may suggest. Upon a dispassionate review, however, of the whole of the present inquiry, I feel myself at liberty to say, that, under the regulated exhibition of purgative medicines, conjoined with personal cleanliness, and access to pure air, I have not found the necessity of employing other remedies to be great, and certainly not so urgent as I at one time thought it to be."

Sudorifics.—Since the mischief exists in the capillary vessels, or the skin, the exhalents not performing their offices, such medicines must be given, as will open the pores and cause perspiration. In this state of the system, there are two difficulties: First, obstructed perspiration, by which the poison is retained in the system, and, second, the want of perspirable matter, by which the process of evaporation is carried on, keeping the skin moist and cool. Hence it is necessary to give *sudorifics* to promote the excretions of the skin.

In the first stages of scarlet fever, the *feet must be bathed*, and an infusion or tea of *saffron* freely given. Also a teaspoonful of the *sudorific* or *sweating drops*, added to a tumbler of *catnip tea*, to be repeated every two hours until moderate perspiration follows. The same dose may afterwards be given in the same manner, three or four times through the day, to keep up a determination to the surface, except the temperature of the body is too great to admit of this stimulating diaphoretic medicine, which is very seldom the case, especially if every other excretion of the body has been duly attended to. Should this be the case, however, we must rely on those medicines which produce perspiration without increasing the heat of the body, such as an infusion of *catnip*, *amaranthus*, &c. which may be drank warm, and drank freely through the day. An infusion or tea made of *lemon balm*, or *sage*, may likewise be given as a change.

Bathing the Surface.—Cold affusions have been highly extolled by some authors, as well as cold drinks. I grant that cold water may often be applied to the surface with impunity, and often with benefit even in the different forms of scarlet fever; but injury may arise from its indiscriminate use. The subsequent effects arising from the repeated and sudden applications of cold to the body, under a great state of excitement, especially in an eruptive disease like scarlatina, may prevent the appearance of the eruption, and cause a recession of them after they have appeared, and thus prove fatal. Bathing the surface with warm rain-water, to which has been added a little ley, is far preferable. No dangerous reaction takes place from the use of tepid, as from cold water; nor will any danger result from it whatever, as it is a most valuable auxiliary, and the use of it cannot be too strongly recommended. We may say with Bateman, when speaking of the application of cold water: "We are possessed of no physical agent, as far as my experience has taught me, by which the functions of the animal economy are controlled with so much certainty, safety, and promptitude, as by the application of cold water to the skin, under the augmented heat of scarlatina and of some other fevers. This expedient combines in itself all the medicinal properties which are indicated in this state of dis-

ease, and which we should scarcely expect it to possess, for it is not only the most effectual *febrifuge*, the '*febrifugum magnum*,' as a reverend author (Dr. Hancoke) long ago called it, but it is in fact the only *sudorific* or *anodyne* which will not disappoint the expectation of the practitioner under these circumstances. I have had the satisfaction, in numerous instances, of witnessing the immediate improvement of the symptoms, and the rapid change in the countenance of the patient, produced by washing the skin. Invariably in the course of a few minutes the pulse has been diminished in frequency, the thirst abated, the tongue has become moist, a general free perspiration has broken forth, the skin has become soft and cool, and the eyes have brightened; and these indications of relief have been speedily followed by a calm and refreshing sleep."

It may be applied as often as the fever increases; but should be omitted if there is any chill, or if the skin is not above the natural temperature. It may then, however, be applied very warm.

When the throat is sore and the swallowing difficult, which often occurs in the scarlet fever, it must be bathed with the following linament or oil:

Take Spirits of Turpentine
Oil of Sassafras,
Olive or Sweet Oil,
Spirits of Hartshorn,
Gum Camphor. Equal parts. Mix.

Apply warm, after which bind a flannel around the neck. The throat may be gargled, if it can be conveniently done, with the following:

Take Sage,
Hyssop. Equal parts.

Make a strong tea or decoction, sweeten with honey, add a small piece of borax, and gargle often.

Mustard Plasters made weak, may be applied to the feet.

Anodynes.—I have always seen the happiest effects from anodynes, combined with diaphoretics.

Diaphoretic Powders.—Our *diaphoretic powders* are attended with very excellent effects. They tranquilize the system, mitigate pain, procure sleep, lessen the fever by causing perspiration, and will have the desired effect in every, and any state or stage of the complaint, particularly after the evacuants recommended have been made.

When there is some inflammation of the brain present, Eberle, among other means, recommends bleeding; but there is much more danger to be apprehended from bleeding, than there is from the inflammation, even without any means made use of to lessen it. There is great debility present in this as well as other kinds of fever, and therefore common sense shows, that whatever tends to augment this debility or prostration, must tend also to hasten its fatal termination. Bleeding in this, as well as other fevers, almost inevitably precipitates the patient into fatal prostration. I know of nothing more unnatural or absurd, than to plunge a lancet into the arm of the little sufferer, under pretence of reducing the inflammation or fever.

When there are symptoms of inflammation of the brain present, bathing the feet and applying tepid water or cooling lotions to the head, such as a mixture of water, vinegar, and brandy, with frequently bathing the feet and applying sinapisms, will do more to allay it, than drawing any quantity of blood from the system. If no other means would subdue it, leeches or cupping might be resorted to; but I have never found either necessary in all my practice.

Some apply blisters under such circumstances; but I object to them. Blisters sometimes are as mischievous as bleeding; they cause a general or preternatural excitement of the system, and the parts to which they are applied often mortify.

MALIGNANT SCARLET FEVER.

I have hitherto dwelt on the severe and ordinary form or type of scarlet fever, and the treatment given is, in general, sufficient for the other species; but when it assumes a more formidable and malignant character, some variation is called for.

Should the attack of *Scarlatina* be very violent, it is liable to run into a malignant type. It is, therefore, necessary to use the most energetic means to arrest the fever in its incipient stage. For in proportion as the disease is controlled and checked in its commencement, will its subsequent course become more manageable, and be attended with less violence and danger. When it is judiciously treated in the beginning, the patient is safely and speedily conveyed through it, without that exhaustion and prostration, which results from the lamentable and dangerous prostrating practice of orthodox physicians, or physicians of the old school. Should, however, the patient become very feeble and debilitated, a restorative or stimulating course of treatment must be pursued. Wine whey may be given. Infusions of *Virginia snake-root* and *chamomile flowers*. It may be repeated two or three times a day. An infusion of *boneset* may likewise be given.

Expectorants or Emetics.—When the throat becomes very much affected, emetics are very valuable.

“Emetics,” says Armstrong, “are the best gargles, where the throat is much obstructed from an accumulation of tenacious mucus; their operation effectually dislodges that morbid secretion for a time; often greatly relieves the respiration; improves the appearance of the ulcers; and they may be repeated where no abdominal inflammation exists, at any time, during the continuance of the fever, whenever the respiration or swallowing becomes much impeded by an accumulation of phlegm.” Expectorants are in general to be preferred.

Dr. Thomas, in treating of this species of scarlet fever, thus remarks:—“At the commencement of cynanche maligna it has been found of service to give a gentle emetic: wherefore a few grains of ipecacuanha may be taken. It will not fail to bring off a considerable quantity of acrid matter, which, by getting into the bowels, might induce a diarrhoea; an affection to be avoided by every possible means, as always adding to debility, and endangering the life of the patient. During the first four-and-twenty hours, an emetic will in some cases cut short the

progress of the disease, and in all it will be likely to break the force of it. At an advanced stage of the disorder, if we still wish or think it proper to evacuate the contents of the stomach, it may be done by an infusion of chamomile flowers, in preference to ipecacuanha.

The grand objects to be kept in view in this malignant disease, should be, to check or counteract the septic tendency which prevails; to wash off from time to time the acrid matter from the fauces, and to obviate debility. Should any particular symptoms arise during its progress which may tend to aggravate the disease, such as diarrhœa, hæmorrhage, &c., they ought to be immediately attended to."

"In the year 1785, at which period I was in the West Indies, this disease prevailed in the island of Saint Christopher's, as a universal epidemic among children; and a vast number of them fell martyrs to it, in spite of the utmost endeavours of the profession to save them; when at last the most happy effects were derived from the use of the remedy, the basis of which was Cayenne pepper.

Take two table spoonsful of Red or Cayenne Pepper.

A teaspoonful of Salt.

Add half a pint of boiling water.

In fifteen minutes after add half a pint of Vinegar.

Let it stand an hour, then strain through a fine cloth.

Give two table spoonsfuls every half hour.

The speedy and good effect produced by the use of this medicine in every case in which it was tried, evidently points out the utility of giving warm aromatics, which will bring on a timely separation of the sloughs, as well as other antiseptics, to correct the tendency in the parts to gangrene.

Since the period above mentioned, many practitioners in the United Kingdom have become vouchers for the very beneficial effects which were derived in various instances of cynanche maligna from this medicine. My own experience induces me to speak well of it also."

Yeast may be freely given, if the putrid symptoms continue, and the throat may likewise be occasionally gargled with it. It must be mixed with milk, and a little honey added. If suppression of urine occurs, give a strong tea or infusion of *spear-mint*, and apply *hops* and *vinegar*, simmered together, over the region of the bladder.

Mortification.—The face and inside of the mouth often mortify in scarlet fever, particularly after the use of mercury. When this is the case, apply a *yeast poultice* over the part; and let the mouth be gargled with it: or apply it to the parts in the best manner possible.

Dropsy.—The dropsy sometimes follows the scarlet fever; generally, in consequence of mal-practice. It occurs after bleeding or mercury. When this is the case, the following prescription may be given:

Take Elder Bark, (*Sambucus Nigra*.) 1 oz.

Lisbon Wine, 1 quart. Simmer an hour.

Give a wine glass full, four or five times a day. Let *parsley tea* also be freely drank.

REGIMEN.

“Through the whole course of the disease” says Thomas, “the patient is to be supported with a sufficient quantity of liquid vegetable nutriment, such as gruel, barley-water, and preparations of tapioca, Indian arrow-root, rice, sago, and panado; and his ordinary drink may consist of wine-whey, or Port wine negus acidulated with orange-juice, or some other acid.

The quantity of wine allowed must be in proportion to the age of the sick, the violence of the febrile symptoms, the degree of debility that exists, or the tendency that there is to putrescency.

The chamber should be kept sufficiently ventilated, and of proper temperature, so as not to be too hot, nor at the same time to be so cool as to give any check to the perspiration or efflorescence; and it may be sprinkled several times a day with warm vinegar in which rosemary or some other aromatic herb has been infused. The greatest cleanliness is moreover to be observed in removing, as soon as possible, whatever is voided by stool; the patient’s linen, as also that of his bed, ought frequently to be changed, and the mouth and throat be repeatedly washed and kept clean.

The putrid sore throat being highly contagious, especially among children, it will be prudent, on the first appearance of the disease, to separate the sick from the rest of the family: and in order to destroy the contagion, and render the attendants less susceptible of being infected, it may be advisable to fumigate with the nitric or muriatic acid gases, as advised under the head of Malignant Fever.

The capsicum medicine before mentioned has not only been used in the cure of cynanche maligna, but it has likewise been advised for the prevention of it. By giving the attendants of the sick, and others who may unavoidably be exposed to infection, a teaspoonful or two every three hours, using it at the same time as a gargle, the preventive effect of the remedy is said to have proved certain. It seems to act by producing and keeping up a regular excitement in the tonsils, uvula, and fauces, and thereby enabling them to resist the sedative effect of the poison which is inhaled.

PREVENTION.

“Scarlatina,” continues the same writer, “being of a very contagious nature, and never failing to excite the greatest consternation and anxiety when it breaks out in schools and families, it seems right to notice the means which have been recommended, under such circumstances, for checking its progress, and attempting its total extinction.

So long ago as 1779, Dr. Haygarth preserved 37 boys from the scarlet fever in a boarding-school at Chester, by confining a patient ill of it to a violent degree, in a separate room of the same house, and by attention to perfect cleanliness. In a boarding-school at Bath, in 1805, two young ladies had a scarlet fever and a malignant ulcerated sore throat, one of them dangerously. The governess visited the patients, and assisted to syringe their throats frequently in the day. After washing her hands, and with other strict attention to perfect cleanliness, so as care-

fully to avoid conveying any contagious dirt out of the sick chamber, but without changing her garments, she went among sixty-five of her scholars in the adjoining rooms of the house to hear their lessons and examine their work: not one of these young ladies was infected with the fever, as Dr. Haygarth was informed by the physician who attended these patients. The testimony of such numerous facts proves, beyond all controversy, that contagious miasms, in his opinion, do not adhere to clothes so as to infect others closely exposed to them. Hence typhus, scarlatina, &c. are always caught either by miasms issuing from the patient, or by miasms issuing from the contagious poison in a solid or liquid form discharged from the patient; but not by miasms adhering to clothes, &c. It completely confirms the fourth law of contagion mentioned under the head of Typhus, which is of very great importance, being highly conducive to the simplicity, facility, and certainty of the rules of prevention. If, in future, a patient ill of either typhus or the scarlet fever, be permitted to infect the family, where there is a room in the house for the separation of the sick, it will be justly imputed to the want of knowledge or the want of care in the attendants.

All masters and mistresses of boarding-schools ought for their own sake, as well as for the interest of the children committed to their care, to be provided with one or more separate apartments, in proportion to the size of the establishment, for the reception of invalids. These should be so contrived that the communication between the rooms appropriated for the sick and the rest of the house may be speedily and completely cut off at any time. If the establishment be too small to admit of such appendages under the same roof, a proper lodging should be reserved in the neighbourhood, to be always in readiness, whenever the occasion might require to resort to it.

As soon as the fever manifests itself in one subject, the person so affected should be separated without delay from all the rest. The next essential step to be taken is to subdue unnecessary alarm and consternation; in the performance of which duty the parent or guardian must co-operate fully with the instructor. Where the scholars are numerous, and the extent and disposition of the premises admit of it, the best plan is not to disperse the school; for by dismissing the children, those in whom the infection is latent, and to be afterwards produced, thereby convey it to their respective families, and so promote the further propagation of the disease, to the great injury of the junior branches in particular, who are more susceptible of the contagion than adults. Having ascertained and cut off the source of infection; having separated the originally tainted as soon as they begin to sicken, and while they yet remain incapable of imparting disease; having disposed of them in proper apartments, and strictly enforced the rules of prevention; the evil may be crushed in its infancy. The extent and magnitude of the mischief will thus be accurately measured, and totally obviated.

But if the accommodations of the establishment be too limited for the complete execution of this scheme, or parents be unwilling to commit their offspring to any other than their own inspection in the time of illness, it is a sacred duty imposed on them not to admit even a suspected child, much less a diseased one, into family intercourse with themselves, their

other children, or their servants. A separate apartment, where circumstances allow of such a convenience, ought to be in readiness, or in a state to be made ready, for accidental sickness; and this should be at the top of the house, or upper story, as the current of heated air is naturally upwards, and the atmosphere loaded with contagious steams emanating from the body, will, if the patient be in a lower apartment, diffuse themselves over the whole house, whereas, if he be placed above, they will have a ready vent. Here a strict quarantine should be performed, whether the subject be suspected or convalescent, the period of which may be regulated, partly by what is already known on the subject, and finally determined by future observation and the results of aggregated facts. If the child be really infected, immediate separation, with a suitable regimen, should be adopted.

To annihilate the powers of contagion, we may employ fumigations with manganese, salt, and sulphuric acid, or we may have recourse to those of the muriatic or nitric acid.

In regard to prevention, it is obvious that an improvement of the diet in such as live low, moderate exercise in the open air, bathing, and in short every mode of strengthening the constitution, with great attention to cleanliness and ventilation, must have a tendency to ward off the disease. Those who are in attendance ought as much as possible to avoid inhaling the breath of the sick, as it is clear that scarlatina, as well as some other diseases, is taken in this manner."

ADDITIONAL REMARKS.

Since Scarlet Fever in some of its forms is so extensively prevalent, and often so very fatal, a judicious course of treatment is imperiously called for, and I know that such treatment is recommended above. It has been so repeatedly tested, that it no longer remains a subject of doubt; but is established on sure, safe, and unerring principles, and to be known needs but to be tried. The practice of bleeding and giving mercury, in this and other diseases, will no longer exist, when people learn the difference between the two kinds of treatment.

CHAPTER VII.

MILIARY FEVER. (*Febris Miliaris.*)

DESCRIPTION.

IN this fever, nature seems to be endeavouring to drive out the morbid matter to the surface of the body, by increasing her secretory and excretory motions.

It derives its name from the small pustules or bladders which appear on the skin, resembling in shape and size the seeds of *millet*. These pustules or pimples are either red or white, and sometimes both are mixed together; sometimes they are distinct, and sometimes in clusters.

Sometimes this is a primary disease, but more frequently symptomatic of some other malady; as the small-pox, measles, inflammation, putrid or nervous fever, &c. In all which cases it is generally the effect of too stimulating a regimen or medicines.

CAUSES.

This fever is sometimes occasioned by violent passions and emotions of the mind; by great evacuations, a weak watery diet, rainy seasons; by the immoderate use of cold, crude, and unripe fruits, impure water, and unwholesome provisions. It may also be occasioned by the suppression of any customary evacuations, as issues, setons, ulcers, the bleeding piles, or the menstrual flux.

It attacks both sexes, all ages and constitutions, but more frequently people of weakly and delicate constitutions. This disease in child-bed women is often occasioned by great costiveness during pregnancy, and very frequently by their excessive use of green trash, and other improper things, in which pregnant women are too apt to indulge; but indolence and inactivity are the most general causes.

SYMPTOMS.

This fever, when it is a primary disease, generally commences with a violent cold stage, succeeded by great heat, anxiety, and sighing; the heat soon increases, and produces a profuse sweat, preceded by a sense of pricking in the skin; and it has a peculiar, strong, disagreeable smell. The period of eruption is indeterminate; it seldom attacks the face, but appears first on the neck and breast, and thence spreads all over the body. The patient is restless, and sometimes delirious; the tongue appears white, and the hands shake, with often a burning heat in the palms; and in child-bed women the milk generally ceases, and also the other discharges. After the patient has experienced an itching or pricking pain under the skin, innumerable small pustules of a red or white colour begin to appear. These symptoms then generally abate,

the pulse becomes fuller and softer, the skin moist, and the sweat as the disease advances, has a more fetid smell: the oppression on the breast and spirits usually subsides, and the customary evacuations regularly return. Though the eruption appears at no fixed period, nor is of any regular certain duration, the pustules generally begin to dry and fall off about the sixth or seventh day from the eruption, occasioning a very troublesome itching in the skin.

The pustules usually come out on the third or fourth day, when the eruption is critical, but when symptomatical, they may appear at any time of the disease. When the pustules appear and disappear by turns, there is always danger; but when they disappear suddenly, and do not appear again, the danger is very great.

In child-bed women the pustules are commonly at first filled with clear water, afterwards they become yellowish. Sometimes those of a red colour are interspersed. When these only appear, the disease is named a rash.

If a diarrhœa comes on in the progress or decline of the disease, and is suddenly checked, it may occasion an apoplexy. In child-bed women a diarrhœa is a very dangerous symptom; and the change of the colour of the urine from a yellow to a pale colour is alarming; drowsiness is a favourable symptom. Free breathing, moderate sweat, without much debility or depression, are favourable symptoms, and on the contrary dangerous.

The type of this fever is generally of the typhoid kind, on account of the excessive discharges by the skin. When of a typhus nature it is generally white; on the contrary if of the synocha, red; this is owing to the difference of impetus of the blood.

TREATMENT.

If the stomach is oppressed, and if there be nausea, &c. give a mild emetic, and then treat it on the same principle as other fever, particularly *Scarlatina*. We must not increase the sweat too much for fear of debility.

Moderate doses of physic must be occasionally given, and such liquids and infusions drank, as cause a moisture of the skin. For this purpose give *Saffron* and *Snake-root* tea. The feet must be daily immersed in ley-water, and the body must be frequently bathed with the same, and applied warm. There is danger oftentimes in this, as well as in many other diseases, of doing too much. A particular attention only is required to all the *secretions* and *excretions*. Here, as we have before stated, consists the "grand secret," of curing febrile, as well as most other complaints.

RÉGIMEN.

In all eruptive fevers, of whatever kind, the chief point is to prevent the sudden disappearing of the pustules, and to promote their maturation and expulsion. For this purpose, the patient must be kept in such a temperature as neither to expel the eruption too fast, nor to cause it to retreat prematurely. The diet and drink ought therefore to be in a moderate degree nourishing and cordial: but neither strong nor heating.

The patient's chamber ought neither to be kept too hot nor cold; and he should not be too much covered with clothes. Above all, the mind is to be kept easy and cheerful. Nothing so certainly causes an eruption to recede as fear, or the apprehension of danger.

The food must be weak chicken broth, with bread, panado, indian-meal gruel, &c. to a gill of which may be added a spoonful or two of wine, as the patient's strength requires, with a few grains of salt, and a little sugar. Good apples, roasted or boiled, with other ripe fruits of an opening cooling nature, may be eaten.

The drink may be suited to the state of the patient's strength and spirits. If these be pretty good, the drink ought to be weak: as *catnip* and *balm* tea.

When the patient's spirits are low, and the eruption does not rise sufficiently, his drink must be a little more generous; as wine whey sharpened with the juice of orange or lemon, and made stronger or weaker as circumstances may require.

Sometimes the miliary fever approaches towards a putrid nature, in which case the patient's strength must be supported with generous cordials, joined with acids; and if the degree of putrescence be great, the *Peruvian bark* and *yeast* must be administered. If the head be much affected, the body must be kept open by injections, or clysters.

CHAPTER VIII.

PUERPERAL FEVER. (*Febris Puerperalis.*)

DESCRIPTION.

THIS is a disease peculiar to women after delivery, particularly in lying-in hospitals, and is supposed to occasion the death of nearly one half who die in child bed. Three fourths of those who have been attacked, have fallen victims to it. It commences, in general, three or four days, sometimes a week, after delivery; and it appears to occur oftentimes as an epidemic.

CAUSES.

Various reasons have been assigned as the cause of puerperal fever; but none very satisfactory seems as yet to have been given. A check of perspiration from cold, combined with a moist and unhealthy state of the atmosphere, probably gives rise to it. Morbific matter is retained, enters the circulation, and is thrown upon some of the viscera of the abdomen, exciting inflammation and other symptoms of the complaint; or it may cause the complaint, by mixing with the circulating mass.

The late Dr. Young, professor of midwifery at Edinburgh, was of opinion, that the puerperal fever, strictly so called, is in every instance, the consequence of contagion; but he contends, that the contagious matter of this disease is capable only of producing its effects, in consequence of a peculiar predisposition given by delivery and its consequences. In support of this doctrine he remarks, in a paper read in the

Philosophical Society of that city, that for many years the disease was altogether unknown in the lying-in ward of the Royal Infirmary at Edinburgh; but that after it was once introduced into the hospital, almost every woman was, in a short time after delivery, attacked with it; although prior to delivery, she may have lain even for weeks together, not only in the same ward with the infected, but even in the very next bed. He further remarks, that it was only eradicated from the hospital in consequence of the wards being entirely emptied, thoroughly ventilated, and new painted. After these processes, puerperal females in the hospital remained as free from the disease as formerly.

With respect to the infectious nature of this fever, a great contrariety of sentiment has indeed existed: the probability is in favour of its being so; but it is nearly impossible to form a decided opinion on the subject. Doubtless it will be the safest practice to consider it as infectious, and to cut off all intercourse of pregnant and parturient women with those who labour under it.

It is certain that puerperal fever has a strong tendency to the typhoid type in an advanced stage, although at its commencement, or during the first twenty-four or thirty-six hours, it is usually attended with inflammatory symptoms, and even with topical inflammation in the abdominal viscera, but more particularly the peritonæum, or membrane which envelopes them.

SYMPTOMS.

Puerperal fever commences with rigor or chills which is succeeded by great heat, and frequently ends in perspiration; but its characteristic symptom, by which it is always accompanied, is pain in the region of the uterus, which, although generally attended with remarkable aggravations, resembling after pains, has no complete intermission as they always have. It is increased by motion, attended by extreme soreness and tenderness to the touch, and accompanied by a pulse so rapid as to rise to 140 to 160 in a few hours after the attack.

The pulse especially during epidemic constitutions, although full and strong, and but moderately quick, at the very commencement of the disease, in a few hours becomes very rapid, running up to 160 strokes in a minute, and is then proportionably small, at the same time the patient's strength rapidly fails, and her countenance expresses great pain and anxiety, her head is frequently affected with pain, giddiness, and with a ringing in her ears. The secretion of milk is generally suppressed, the breast becomes suddenly flaccid; the bowels in the commencement are generally costive, but a diarrhœa is soon apt to come on. The belly swells to a great extent, and the tenderness is spread over the whole abdomen, compelling the patient to lie immoveable in one posture, with her extremities drawn up, and generally on her back; although such is the extreme tenderness, that she cannot bear the weight of the bed clothes. The tongue soon becomes foul, the stomach is oppressed with nausea, and the teeth collect a brown sordes, the breath offensive, purple or red spots appear, and extreme debility comes on sooner in this, than in any fever which begins with such decided symptoms of inflammation, and makes a sudden and total change of its nature, into that of a putrid and malignant fever.

This complaint frequently attacks within 48 hours, generally within five days after delivery, and in general, the earlier the attack, the more violent are its symptoms. It runs through its course in a very short period of time, ending in death in a very few days: indeed a great and sudden mortality, particularly in some epidemic constitutions, has proved the most distinguishing, as well as the most terrible characteristic of the disease. In some epidemics, very few indeed; in others, it is said, none have recovered: some patients have died within eighteen hours, and most of the fatal cases have ended within three or four days: but when it has ended in recovery, the symptoms have often been protracted to six or eight days, with occasional but irregular intermissions and exacerbations; and it has been remarked, that after very considerable remissions, indeed after such complete intermissions as to afford the most sanguine hopes of recovery, the attack has been renewed with increased danger.

Such in general is the course of the puerperal fever; the symptoms of which, however, may be often varied, according to the constitution of the patient, the degree of the disease, and its earlier or later invasion after delivery.

PROGNOSIS.

The reappearance of the lochia, and a gradual subsidence of the abdominal tension and soreness after copious stools, the pulse at the same time becoming slower, with a moist skin, may be regarded in a very favourable light. On the contrary, an agitated countenance, with a hurried unconnected manner of speaking, constant sighing, attended with a tossing about of the arms, pain and oppression at the chest, visual deceptions, imaginary strange sounds and voices, muttering and stupor, are to be considered as unfavourable symptoms. An extensive swelling of the belly, so as to sound on striking it with the fingers, sudden cessation of pain, irregularity of the pulse, coldness in the extremities, clammy moisture diffused over the whole body, frequent dark-coloured and fetid evacuations by stool and an indifference to all external objects, denote certain and speedy death.

DISSECTION.

The morbid appearances observed on dissection are usually confined to the abdomen. The first thing that often presents itself is a collection of whey-like fluid in the cavity of the abdomen, which is sometimes so considerable in quantity as to amount to several quarts; and it has a peculiarity of smell different from any other fluid to be met with in the human body, either in health or disease. Where it is large in quantity, the surfaces of the different viscera and of the peritonæum will usually be found covered with a crust formed of a solid part of this matter, resembling coagulated lymph. If there be any interstices between the intestines or the other viscera, they are frequently filled with large masses of the same, adapted exactly to the shape and size of such interstices. In a few cases, a deposit of a caseous and serous nature has been discovered likewise in the head, breast, and external cellular membrane, as has before been observed. In most instances there is found a slight degree of inflammation in some part of the cavity; but it is not

confined invariably to any particular place; as the uterus, ovaria, peritonæum, omentum, intestines, and bladder, have all in their turn been observed in a state of inflammation. In many cases of dissection, a considerable quantity of purulent matter has been found in the cavity of the abdomen.

COMMON TREATMENT.

Bleeding profusely and repeatedly, mercury, blisters, opium, &c.

REFORMED PRACTICE.

It requires no discernment to see the pernicious effect of the above practice. Some bleed five or six times in succession, which soon sinks the patient into the arms of death. Mercury is also given at the same time, which hastens dissolution.

Indications of Cure.—The principal indication in the cure of this disease, is to subdue the inflammatory symptoms; to effect which, sweating and purging are the two Herculean remedies to be relied on.

Some prescribe emetics in puerperal fever, but I have very little confidence in their utility. The *sweating drops* must be given in doses of a teaspoonful in a tumbler of *catnip tea* every two hours until free perspiration is produced. Physicians in general place their greatest reliance on copious bleeding. We place *our* greatest reliance on copious perspiration. It must be continued until the inflammatory symptoms subside. Bathing the surface and feet greatly promotes it.

Purgatives are exceedingly important in reducing this fever. The same may be given as recommended in the preceding fevers, and repeated at least once a day. If vomiting supervenes, give the saline purgative:

Take Epsom salts, eight ounces.

Hot or boiling water, eight ounces.

Add Muriatic Acid, one dram.

Give a table spoonful in a tumbler of *mint tea* every hour till it acts upon the bowels. This stops the vomiting, allays the heat and in every respect acts favourably.

“To alleviate the soreness and distension of the abdomen, we may recommend the application of fomentations both inwardly and externally: inwardly, by injecting every four or six hours, and administering emollient clysters from time to time; and externally, by applying flannel cloths wrung out in a warm decoction of equal parts of *chamomile flowers* and bruised *poppy-heads*, with an addition of about one-third of *rectified spirit*, over the whole region of the abdomen; and these ought to be renewed as often as they become cold, taking due care that they are not so wet as to run about the bed and incommode the patient.”

After suitable evacuations *Diaphoretic Powders* may be given, particularly at bed-time. The dose must depend on the severity of the pain, and the age and constitution of the patient. It may be repeated every two hours until there is a mitigation of the symptoms, and a moisture of the skin.

Should putrid or malignant symptoms commence, *yeast* must be given, as much as the stomach will bear. Wine and porter, may likewise

occasionally be given. An infusion of *chamomile flowers* cold, may also be taken to keep up the strength of the patient, nourishing diet, &c. Dr. Guinot recommends ten or twelve grains of the *Carbonate of Potash* to be given in any proper vehicle three times a day, not only in puerperal fever, but in all diseases connected with the secretion of milk. This treatment he recommends under the idea that the disease is occasioned by a predominance of acid. Other practitioners likewise speak of its good effects.

REGIMEN.

A very light, cooling diet should be used in the commencement of the disease, and in the latter stages of it, a more nutritious diet recommended; indian-meal gruel, panado, toast, and bread water, barley-water, rice-water, &c.

PRECAUTION.

"It would appear," says an experienced physician, "that the effluvia of a patient under puerperal fever is an animal poison *sui generis*, capable of acting on pregnant females, their situation giving the predisposition necessary for the operation of its influence. The usual mode of communicating the infection in private practice is by being delivered by some accoucher who has lately been attending a woman labouring under puerperal fever, or her being visited by female friends who have been where it prevailed. It therefore behoves every practitioner when he meets with the disease to observe every possible precaution in changing his clothes, and by careful ablution of his hands to guard against conveying infection to other parturient women: moreover, all pregnant women should be excluded from the house; nor should the nurse or other persons about the sick be permitted to go abroad and visit women in a stage of pregnancy.

"To prevent the disease from occurring, it will be proper to keep the patient's mind both before, during the time of labour, and afterwards, as free from every kind of uneasiness as possible, as anxiety might greatly predispose to an attack of it. She should likewise carefully avoid any exposure to the infection of fever before delivery, as well as to the occasional causes of it afterwards. Every woman lately delivered ought cautiously to guard against cold; but in doing this, her room should at the same time be kept of a proper temperature by allowing a sufficient ventilation.

"It being a well-known fact that puerperal fever has been chiefly confined to close apartments and small hospitals, and that since the lying-in chambers have been made more airy and commodious, and the hospitals larger, the disease seldom prevails epidemically, or becomes general. Due attention should be paid to a free ventilation; for it is by no means improbable that a cool air in a lying-in chamber will frequently prevent, and its opposite be likely to induce, the phenomena of puerperal fever.

"The patient should observe the strictest cleanliness both as to herself and the bedding. On the coming of the milk, her breasts ought to be drawn repeatedly throughout the course of the day, by some person ac-

customed to the business, or by applying the child; her body should be kept perfectly open after she is delivered, as well as before her confinement, by some mild purgative medicine, and she should abstain from all food of a heating or irritating nature.

“An upright posture will be most proper, in order to discharge more readily any putrescent matter that may be in the uterus.

“When the disease prevails as an epidemic among puerperal women, or occurs in a lying-in hospital, all communication ought immediately to be cut off between those who are affected, and such as have lately lain in, or expect shortly to do so; and in order to root out the disease and stifle contagion, we should have recourse to fumigations, as advised under the head of Malignant Fever, and afterwards to painting, white-washing, and a free ventilation.

CHAPTER. IX.

HECTIC FEVER. (*Febris Hectica.*)

DESCRIPTION.

HECTIC fever is generally characterized by a frequent, weak pulse; flushing in the face, the hands or the feet; night sweats or diarrhoea. A wound or local injury upon a healthy person produces a fever that may properly be termed symptomatic or sympathetic.

CAUSES.

The cause of hectic fever is almost always some local disease. This form of fever appears to be a feeble and hopeless struggle of the system about to be overpowered without any apparent tendency to remove the disease. It arises from long continued irritation of any severe local disease upon the constitution whether accompanied with suppuration or not. It arises from the absorption of pus or matter from tubercles on the lungs, diseased hip joints, white swelling, curvature of the spine, scrofula, abscesses, ulcers, &c.

SYMPTOMS.

Hectic fever arises at different periods after the commencement of any serious local disease. This may be owing to some peculiarity of constitution, or the particular structure or functions of the part diseased. The more weak and feeble the patient naturally is, and the more severe and incurable the local disease, the sooner do the hectic symptoms generally begin, and the more rapid is their progress.

Sometimes the first accessions of this fever are almost imperceptible; a very slight degree of emaciation; a pulse a little quicker than ordinary, with a trivial increase of heat, particularly after meals, being the only early symptoms. As the fever becomes more established, the symptoms generally run as follows: a frequent small pulse quickens towards

evening, but is always ten or twenty strokes in a minute faster than in health; moist skin; pale copious urine, with sediment; a good deal of debility; the tongue seldom so much furred as in most other fevers, its edges being of a bright red colour, and the papillæ swollen and prominent; a florid, circumscribed suffusion of the cheeks; loss of appetite, sometimes an ejection of all food from the stomach, a great readiness to be thrown into sweats; profuse nocturnal perspirations; frequently a constitutional purging; repeated chills and flushes of heat; derangement of the nervous system; loss of sleep; indigestion; heartburn; flatulence. When however the biliary system is undisturbed, the digestive powers are little impaired, and the appetite remaining good to the last. In an advanced stage, the hair falls off, and the nails become bent.

Hectic fever is more or less remittent, but never wholly intermittent. It is observed that the frequency of the pulse is generally from 100 to 140 in a minute, seldom falling below 100, even in the time of a remission, and in some cases never being under 120: while in other constitutions, the pulse of health may be so slow, that 90 strokes in a minute would be enough to indicate an exacerbation.

The principal exacerbations generally occur about five in the afternoon: and if we are to credit Galen, Vogel and Wilso, who differ from Cullen on this point, an increase of the febrile symptoms always follows a full meal at any time of the day. The exacerbations, which are mostly preceded by chills, are marked by a sensation of burning heat in the palms of the hands, which become red and mottled, and frequently in the soles of the feet. A circumscribed redness is seen in the cheeks, the colour of which, in persons of a florid and delicate complexion, has also, during the remission, a more abrupt termination than in health. It has not been ascertained by the thermometer, whether the temperature of the blood is actually reduced during the chills which usually precede an exacerbation. Whatever may be the form of exacerbation in the day time they are generally succeeded towards the end of the night by copious sweats. When diarrhœa supervenes in the latter stages of the disease, the sweat generally disappears. The reddish sediment of uric acid in the urine is generally observable after the sweats, and absent during the hot fit, when the secretion is usually pale and limpid.

Mr. Hunter divides hectic fever into two kinds; viz. one which arises from the absolute incurability of the local complaint; another, which depends upon a disease that is curable if the patient's constitution had sufficient powers.

TREATMENT.

In the cure of hectic fever, attention must first be directed to the exciting cause of the disease before it can be removed. If it arise from the absorption of matter in consequence of an ulcer, how can it be cured while the primary affection exists. As soon as the disease is relieved or cured, which produces the febrile disturbance, the fever will cease. But when the local disease cannot be cured, which causes it, it must of course be mitigated, which in almost every instance can be effected. Under such circumstances, the hectic fever must be treated on general principles. The bowels must be regulated by laxative medi-

cines, and upon every accession of the fever, the surface must be bathed with tepid ley water.

Attention must be paid to the debility which almost invariably exists. And it must be borne in mind that this debility arises in consequence of the night sweats which attend this form of fever, caused by a relaxation of the capillary vessels. They may be checked in almost every instance by administering

15 or 20 Drops of Elixir of Vitriol.

in a gill of water or téa of any kind once or twice a day. At night is the most suitable time to give them. During the day, give an infusion or tea of the *Crawley*, or *Amaranthus* root to be taken cool. This drink may be changed, and an infusion of the *Virginia snake-root* may be taken. It acts both as a diaphoretic and tonic.

Every thing of a stimulating nature should be avoided, but a nutritious diet may be taken.

CHAPTER X.

INFANTILE REMITTENT FEVER.

DESCRIPTION.

THIS fever is peculiar to children, from the age of one, to five or six. It comes on very gradual, manifesting itself by irregularity, which is sometimes by costiveness, and at other times by relaxations of the bowels.

CAUSES.

This fever is evidently symptomatic of disordered digestion. It depends perhaps partly upon absorption of the putrid contents of the intestines.

SYMPTOMS.

On its coming on, the child becomes fretful, his lips are dry, his hands hot, his breath short, the head painful, and his pulse quick, being often 120 in a minute: he is unwilling to stir or speak, the sleep is disturbed by startings, and the food rejected; sometimes very little is discharged from the intestines; and at others too much, the stools being often mucous or slimy; some children are delirious, or lost and stupid; many for a time are speechless. In the course of the day there are several slight accessions of fever, during which the child is usually drowsy; in the intervals of these paroxysms he appears tolerably well, though at times more peevish than usual.

These symptoms probably manifest themselves, more or less, for eight or ten days, when all at once a more violent paroxysm of fever will arise, preceded by a shivering fit and by vomiting. The pulse rises to 140 in a minute; the cheeks are flushed, the drowsiness is much increased, and the child keeps picking almost incessantly at the skin of the lips and nose, and of the angles of the eyes.

This species of fever is mild at its commencement, slow in its progress, and very uncertain in its event. In some respects it resembles drowsy in the head, and I apprehend is sometimes mistaken for it; but in the latter there are occasional screamings, with much tossing of the hands above the head, intolerance of light, with more or less of squinting; whereas in the remittent fever of infants, none of these appearances are to be met with. In this fever the desire for food is destroyed, and the little patient will take neither aliment nor medicine. In hydrocephalus, on the contrary, he will usually take whatever is offered to him without reluctance. The *æces* are remarkably changed from their natural appearances in the remittent fever, being sometimes black, and smelling like putrid mud; and at others they are curdled, with shreds of coagulable lymph floating in a dark-greenish-coloured fluid. In acute hydrocephalus we meet with nothing very similar to these motions.

REFORMED PRACTICE.

The indications of cure in this disease are, to clear the stomach by a gentle emetic, and the bowels by purgatives, to moderate or remove the febrile symptoms, and then, if necessary, to restore the lost energy by tonics.

A dose of *senna* and *manna* may be administered to the child twice or thrice a week. The surface may be bathed with tepid water occasionally, also the feet. If there is pain, apply linen cloths wetted in vinegar and water on the head. Keep up a determination to the surface by giving diaphoretic medicines. Thirty or forty drops of the *sudorific* or *sweating drops* may be given morning and night in *catnip tea*. A tea made of *elder flowers*, *balm*, &c. may be occasionally drank throughout the day. When the fever is nearly subsided, and there is great debility, give tonics, such as an infusion of equal parts of *columbo*, *gentian*, and *chamomile*: give a little occasionally. If there is acidity in the stomach, give the following:

Take Rhubarb, 20 grains.

Sal Eratus, 20 grains.

Add 8 ounces of Mint tea.

A table spoonful may be given to a child two years old, three or four times a day, sweetened with common sugar.

REGIMEN.

A milk and vegetable diet must be observed.

PREVENTION OF FEVERS.

In concluding this class of diseases, I shall give the receipt for preparing the disinfecting gas, as follows:

Take Nitre, pulverized, 6 drams,

Oil of Vitriol, 6 drams.

Mix them in a tea-cup by adding to the nitre, one dram at a time of the oil; the cup to be placed during the operation, on a hot or heated brick, shovel, hearth, or any other heated substance. The mixture to be stirred with a tobacco-pipe, or piece of iron.

CLASS II.

INFLAMMATORY DISEASES.

CHARACTER.

THIS class of diseases is characterized by heat, pain, redness, and swelling. Inflammation is either general or local; *general* when the system is extensively affected, *local* when confined to some particular part or organ. It is also acute or chronic; *acute* when the attack is severe, and the symptoms violent; *chronic* when the inflammatory action has, in a considerable degree subsided, and the disease become less painful, and less violent in its character, and protracted. There are several varieties of inflammation occasioned by difference of cause, function, or texture of the part affected.

All the viscera are subject to inflammation. The various phenomena or symptoms exhibited in this class of diseases, is owing more to the peculiar structure of the part inflamed, than to the exciting cause.

CHAPTER I.

INFLAMMATION OF THE BRAIN, (*Phrenitis*.)

DESCRIPTION.

Phrenitis is an inflammation of the membranes, or brain itself. When it occurs independent of any other disease, it is termed *idiopathic*, or *primary*. It is called symptomatic when it is produced by some other disease, as fevers, eruptions, &c.

CAUSES.

Proximate Cause.—Whatever causes a determination of blood to the head, produces an inflammation of the brain, or membranes. Hence we find that in this complaint, the blood recedes from the extremities, thereby producing coldness, and flows in an unusual quantity to the head, in consequence of which there is heat, inflammation, &c.

Remote Causes.—The remote causes are fits of passion; intense application of the mind; great exercise; external violence of any kind; fractures or injuries of the head, intemperance, exposure to great heat of the sun, suppressed evacuations, &c. Symptomatic phrenitis is produced by the repulsion of febrile and cutaneous diseases.

SYMPTOMS.

Inflammation of the brain exhibits the following symptoms: It usually commences with inflammatory fever, flushed countenance, redness of

the eyes, intolerance of light and sound, head-ache, watchfulness, and delirium. The patient experiences a fulness of the head, which is usually attended with a throbbing of the temporal arteries. The patient becomes restless, his sleep is disturbed, or wholly forsakes him. There is a peculiar disposition in the patient to injure, or destroy himself, which he often accomplishes if he obtains a proper instrument. It is often preceded by great pain in the stomach, which, no doubt is produced by sympathy of the brain. Sometimes fierce delirium does not commence within several days after the attack. The pain is sometimes in other parts of the head. The hearing is acute, sometimes the reverse. There is usually preternatural heat, while the extremities, particularly the feet, are cold, showing evidently a determination of blood to the head. The patient talks incoherently, and delirium gradually increases, till he arrives at a state of complete frenzy. The complaint sometimes, though rarely, intermits. Respiration is generally deep and slow, and now and then difficult; seldom hurried or frequent. The patient imagines that some persons or evil spirits are constantly pursuing him to take his life, from whom he starts with horror, and no argument or assertion can induce him to believe the contrary. Sometimes there is a discharge of mucus from the nose; occasionally blood. It is usually attended with a tremor of the joints, grinding of the teeth, twitching of the muscles of the face, which is often florid, then suddenly turning pale, with a general derangement of the internal functions, and whole system. The length or duration of this disease is very uncertain, as it may prove fatal in a week, at other times it continues for months.

PROGNOSIS:

This disease must always be regarded as very dangerous; but may be removed by judicious treatment. A person to survive the common routine of practice in this complaint, must certainly possess a very robust constitution.

COMMON PRACTICE.

1. The common practice in this disease, is to bleed repeatedly and copiously from the arm, jugular veins, and temporal arteries.

2. Shave the head, and blister.

3. Mercurial purges, salts, antimony, &c.

This constitutes the principal treatment of physicians, and there are strong objections to this practice. As regards bleeding, even fifteen ounces, from some habits, will destroy life; whereas it is recommended to the amount of two or three hundred ounces in a short space of time. The debility arising from the copious depletion recommended, proves much more injurious than all the benefit derived from it; indeed, I have seldom or never seen any present or permanent relief from general blood-letting. Blisters to the head, instead of allaying the inflammation, has a tendency to increase it. Mercurial purges are also improper.

Dr. L. M. Peixotto has the following remarks on this subject: "It is recommended in many of our most popular elementary treatises on the practice of physic and therapeutics, that, in diseases attended by a great determination to the brain, blisters should be applied to the head.

It has always appeared to me that this practice is directly at variance with the object aimed at, and inconsistent with the other measures simultaneously recommended, as ice, cold water, leeches, &c. applied to the same part. One of the strongest advocates for blisters in phrenitis and typhus admits that in mania they are hurtful while they are drawing, and they are therefore best applied to distant parts. (Elements of Therapeutics.) Now the same fact obtains in inflammation of the brain, and every argument drawn from analogy contra-indicates their application so near to the seat of the disease. Dr. John Clarke, in his admirable treatise on diseases of children, deprecates their application to the scalp in phrenitis."

REFORMED PRACTICE.

Indications of Cure.—The indication of cure in Phrenitis, is to divert the blood from the brain, by restoring the circulation in the extremities; in other words, by equalizing the circulation.

Treatment.—Bathe the feet in tepid water to which has been added a little pearlash or ley. Let this be repeated at least twice in twenty-four hours.

Give Purgatives.—Administer a purgative every morning, or every other morning, that kind which acts with peculiar force upon the stomach and first passages. Nothing will be found better than our common physic; to be given as before directed. If the inflammation is very great, apply cups to the temples and nape of the neck. It will be necessary also to keep up a determination to the surface by giving a dose of our *fever or sweating drops*.

Rubefacients.—Should not this treatment mitigate the symptoms after a few days, apply a *mustard plaster* between the shoulders. It also may be applied to the feet at night. When there is great pain of the head, or delirium, apply to it a fomentation of *hops* simmered in vinegar, inclosed in flannel or muslin; to be occasionally repeated.

Anodynes.—Should there be great pain, restlessness, or want of sleep, give ten grains of the *Diaphoretic Powders* in an infusion or tea of *catnip*, to be repeated every night.

A continuance of this course will generally subdue the inflammation in a short time. Cupping will be found altogether superior to general blood-letting. It removes the turgid vessels of the brain, and by its counter-irritating effects produces immediate relief. But even this operation is seldom if ever necessary.

REGIMEN.

The patient must be kept from all noise, and a strict adherence to a light, cooling diet. Nothing of a stimulating nature must be given, either in food or drink.

CHAPTER II.

INFLAMMATION OF THE EAR, (*Otitis.*)

DESCRIPTION.

This is an inflammation of the membranes well furnished with nerves, which are spread upon the internal surface of the ear.

CAUSES.

An inflammation of the ear is usually brought on by exposing the ear to a *partial* current of air. It may arise from cutting the hair of the head very short, particularly in the winter.

SYMPTOMS.

When the ear is inflamed, the pain is very acute, attended with more or less fever, and sometimes delirium. Swelling and redness is often perceived externally, attended with throbbing; suppuration occasionally takes place, when a copious discharge of matter follows. This discharge will sometimes continue for years.

COMMON PRACTICE.

Bleeding, blistering, and purging is generally resorted to, if the pain be severe.

REFORMED PRACTICE.

If the pain be very severe,

Take hops, (*humulus Lupulus.*) a suitable quantity.

Vinegar and water, equal parts.

Simmer the above till the strength is extracted; inclose them in linen or flannel, and apply warm over the ear. Repeat the same until the pain subsides.

Let the feet be bathed in warm water.

Should the above means not remove the pain,

Take oil of sassafras, (*oleum lauri sassafras,*) half an ounce.

Olive or sweet oil, (*oleum olivarum,*) one ounce.

Camphor, (*gummi camphora,*) one dram. Mix.

Warm this liniment, and pour a small quantity on a pledget of cotton, and bind over the ear. Provided the pain still continues, drop it in the ear. A cathartic may be given, and warm infusions given to promote a gentle perspiration.

Laudanum,

Juice of roasted onions, equal parts.

This treatment will almost invariably remove the pain and inflammation of the ear. This complaint more generally attacks children, but adults are subject to it. It sometimes becomes somewhat chronic in its character, and is very protracted. When this is the case, if the means prescribed above should not be sufficient to remove it, apply a *mustard* plaster behind the ear, and to the bottom of the feet, particularly at night.

PREVENTION.

Great care is necessary in screening the head from any cold or current of air. The head should be covered, particularly at night, and a pledget of cotton or wool applied in the ear.

CHAPTER III.

MUMPS, (*Cynanche Parotidea*.)

DESCRIPTION.

MUMPS is a swelling of the glands about the throat, and often occurs as an epidemic. Children of both sexes are more liable to it than adults. It more generally occurs in the spring, than at other periods.

CAUSES.

Contagion.

SYMPTOMS.

One or both of the parotid glands of the neck, become large, hard, and often painful, and sometimes become so large as to impede respiration, and cause a difficulty of deglutition, or swallowing. The swelling is often translated to the testicle and becomes dangerous, increasing for three or four days, then subsides, and wholly disappears. There is usually some fever attending the complaint; other parts are sometimes affected from sympathy. Suppuration rarely, but sometimes takes place. The contents of the tumour being discharged into the *larynx*, and producing suffocation; but this is rarely the case, as the disease usually puts on a mild aspect. The great danger arises from the patient's taking cold.

COMMON TREATMENT.

In some cases mercurial ointment is recommended, blisters and bleeding.

REFORMED PRACTICE.

The patient should be directed to keep warm in bed, and perspiration promoted, by drinking freely of diluting liquors, such as an infusion of *balm* tea. If there is costiveness, give a gentle purgative, and

bathe the feet. Cover the swelling with a pledget of cotton, and should it be very painful or troublesome, it may be bathed with the following liniment:

Castile soap, scraped, one dram.

Sassafras oil, (*ol. sassafras.*) half an ounce.

Sweet oil, (*ol. oliv.*) one ounce.

Camphor, (*gum camph.*) three drams. Mix, and apply warm three times a day.

In case of a recession, (by which this complaint is thrown to the testicle or other parts,) a free perspiration must be promoted by giving one teaspoonful of the red or sweating drops every hour, diluted with tea and sweetened. Should suppuration take place, a poultice must be applied, made by adding Indian-meal to beer until it is formed into the consistence of a poultice. The above treatment has invariably been found successful.

CHAPTER IV.

QUINSY OR INFLAMMATORY SORE THROAT.

(*Cynanche Tonsillaris.*)

DESCRIPTION.

WHEN the tonsils, commonly called the almonds of the ear, or the mucus membrane lining the throat, become inflamed, it is termed *quinsy*, or inflammatory sore throat. It generally affects the young and sanguine, and it occurs more especially in the spring and autumn.

CAUSES.

The most common causes of this disease are a sudden cooling of the body, and especially of the throat, in consequence of drinking cold water when the system is in a state of perspiration; wet clothes; wet feet; damp beds; moist air; drunkenness; acrid or irritating food, &c.

An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the neck. Singing, speaking loud and long, or whatever strains the throat, may also cause an inflammation of that organ. It may also proceed from pins, bones, or other sharp substances sticking in the throat; by sitting near an open window, or in a room newly plastered or white-washed. This disease is sometimes epidemic and infectious.

SYMPTOMS.

An inflammatory sore throat discovers itself by a difficulty of swallowing and breathing, accompanied by a redness and tumour in one or both tonsils; dryness of the throat; foulness of the tongue; lancinating pains in the parts affected; hoarseness of the voice; a frequent but difficult excretion of mucus, and some small degree of fever. As the disease advances, the difficulty of swallowing and breathing becomes great.

er; the speech is very indistinct; the dryness of the throat and the thirst increase; the tongue swells and is encrusted with a dark fur, and the pulse is full, hard, and frequent, beating from 100 to 140 in a minute. In a few cases, small white sloughy spots are to be observed on the tonsils, and in very violent ones there is complete deafness. When the symptoms are considerable, the whole face partakes of it, the eyes are inflamed, and the cheeks florid and swelled; respiration is performed with difficulty, and the patient is obliged to be supported in nearly an erect posture to prevent suffocation. Even delirium and lethargy supervene. The inflammation sometimes proceeds to such a height, as to produce a stop to respiration. Sometimes both tonsils are very much inflamed and swelled, so that it becomes exceedingly difficult to give any kind of nourishment. It sometimes terminates in suppuration, and in some cases subsides without it; terminating by what is called resolution. When suppuration takes place, the parts affected become more pale, and less painful; a sense of pulsation is felt, and very slight chills. The matter is often discharged into the œsophagus or throat, and passes into the stomach, when immediate relief follows.

COMMON TREATMENT.

Bleeding, mercury, and jalap; occasionally neutral salts and antimony. This constitutes the principal treatment in this as well as most other diseases. For authority, see Eberle's and Dewees' late system of practice, and other standard works.

REFORMED PRACTICE.

Indications of Cure.—The first object in the treatment of this disease, is to remove urgent symptoms; the next to subdue or moderate the inflammation. It is truly astonishing that any person, professing a knowledge of the science of medicine, should make use of the common practice to cure this complaint, especially when it is well known that this very treatment occasioned the death of General Washington, as well as thousands of others.

In the incipient stage of quinsy, it is necessary to administer

An Emetic.

None answers better than that which we use in complaints generally. This often affords immediate relief, and removes the disease in a very short time. Should the attack, however, be very severe, and the disease continue, the patient will steam the throat with the following preparation:

Take Wormwood, (*Absyntheum Vulgare.*)

Hops, (*Humulus Lupulus.*)

Catnip. Equal parts.

Make a strong decoction by boiling one or two hours in equal parts of rain water and vinegar. Put these into a large pitcher, or any convenient vessel, over which place a funnel; then let the patient inhale the steam arising from this for fifteen or twenty minutes each time, to be repeated every two hours until the urgent symptoms are removed. The

herbs to be bound on the neck. This generally affords immediate relief, by relaxing the tension of the parts inflamed. The breathing soon becomes easy, and the pain and swallowing much less. The above articles may be put into a common tea-pot, and the steam inhaled from the spout.

The following liniment, or oil, must now be applied to the throat:

Take Sassafras Oil, (*Oleum Lauri Sassafras.*)

Olive Oil, (*Oleum Olivarum.*)

Spirits of Hartshorn, (*Aqua Ammonæ.*) Of each half an ounce.

Add two drams of Gum Camphor, (*Gummi Camphora.*) Mix.

Warm this preparation, and bathe the throat as long as the patient can bear; after which put a piece of flannel around it. This must be repeated occasionally through the day.

It will be necessary also to gargle the throat with the following preparations:

Take Sage (*Saliva Officinalis.*)

Hyssop, (*Hysophus* do.)

Make a strong decoction; to every pint add half an ounce of borax. Let the throat be frequently gargled with it.

When the acute inflammatory symptoms have subsided, a gargle more stimulating may be prescribed, as follows:

Take Sumach Berries.

Golden Seal; one half the quantity of the Berries.

Make a strong decoction; to which add a small quantity of pulverized alum. In the same proportion as the preceding gargle, to be used frequently through the day.

A gargle made of weak ley has been found remarkably efficacious where other means have proved useless, particularly where persons have been subject to the quinsy, and when it assumes a chronic character.

Purgatives must be given repeatedly, as they have a great tendency to allay the febrile excitement: the feet must be bathed in warm rain water, to which has been added ashes or a quantity of ley, and perspiration promoted by the vapour bath or warm drinks, &c. If there is great swelling of the throat apply a poultice made of slippery elm bark and ley.

Should the disease increase, and exhibit symptoms of suppuration, so as to threaten suffocation, the tongue must be pressed down with the finger or handle of a spoon, and the swelling punctured with a common lancet which has been nearly covered with two pieces of pine properly secured, so that a small portion of the instrument is left exposed. This precaution is necessary to prevent wounding any important blood vessels in or near the tonsils. This operation is seldom or never necessary if the disease has been properly treated.

REGIMEN.

All food and drinks of a stimulating nature, must be avoided. Warm diluent drinks. Nothing cold must be given.

PREVENTION.

Great care must be taken to prevent a check of perspiration. The throat should never be uncovered or exposed to the cold air. A piece of flannel should be worn about the neck. The practice of bathing the feet in weak ley water should by no means be neglected. If persons would be careful to keep themselves warm, wear flannel, especially about the throat, use a spare diet, the disease would seldom become very aggravated. It is particularly necessary to guard against drinking cold water when the body has been heated.

The celebrated Col. Aaron Burr of this city, a great enemy to the common practice, had been subject to frequent attacks of the quinsy, for most of his life, from the age of sixteen years and upwards. He had twice tried the orthodox physician without benefit. He submitted to a similar course of treatment, and it effected a cure.

CHAPTER V.

PUTRID SORE THROAT, (*Cynanche Maligna*.)

DESCRIPTION.

This disease generally affects the glands of the throat, while the common quinsy affects the mucous membrane. In the putrid sore throat, there are also spots and ulcers in the fauces, together with great debility of the system. In the inflammatory sore throat, there is always great difficulty of swallowing, whereas in the other these symptoms are not present.

CAUSES.

The cause of this disease is specific contagion; it is often communicated by infection; when it is not, it most generally arises from cold, in habits predisposed to the disease. Whatever tends to produce putrid or malignant fevers, may occasion the putrid ulcerous sore throat; as neglect of cleanliness, unwholesome air, damaged provisions, &c.

SYMPTOMS.

Some consider this disease the same as scarlatina maligna, but although very similar, there appears in some respect a marked difference. The symptoms of this complaint are chills, fever, stiffness of the neck, soreness and inflammation of the throat. Ash coloured spots appear upon the inflamed parts which produce deep ulcerations. The breathing and speaking are attended with a peculiar noise and hoarseness. It is ushered in with sickness, vomiting, looseness, and great anxiety. The pulse in general small, quick and fluttering. The countenance is often full and bloated, sometimes pale and sunk, and the breath is intolerably offensive. The ulcers become livid or black, and sometimes gangrene

to a considerable degree takes place. Putrid symptoms now appear, under which the patient sometimes sinks in a few days. At the close of the disease, hæmorrhages from the mouth, nose, and other parts take place.

COMMON TREATMENT.

Mercury, bleeding, blistering, antimony and salts.

REFORMED PRACTICE.

Indication of Cure.—The indication of cure will be to counteract a putrid tendency and to keep up the strength of the patient. Bleeding and mercury now generally prescribed, are extremely injurious.

In the first stage of the disease, a *mild emetic* may be administered, after which *mild cathartics* may occasionally be given. If there is great soreness and inflammation of the throat, let the patient inhale the steam of the decoction mentioned in the treatment of the common quinsy. The liniment there mentioned may also be applied to the throat.

When putrid ulcers appear in the throat, let it be gargled with a mixture of yeast and milk. It will be necessary also to administer antiseptic medicines; a wine glass of good yeast may be taken through the day. If the pulse is very weak, and the patient sinks, the system must be supported by stimulating medicines and liquids. Porter and wine may occasionally be given.

Dr. Thomas speaks in the highest terms of the efficacy of the following formula, which from the component parts is unquestionably very valuable.

Two table spoonsful of Cayenne Pepper.

Salt, a teaspoonful, in

Half a pint of boiling water, and add

The same quantity of warm Vinegar.

Let it stand for about an hour, and strain the liquor through a fine cloth. Dose two table spoonsful every half hour. A plaster may be applied to the throat made by melting equal parts of common *Brown Soap* and *Rosin* to be spread on a thin leather or linen.

CHAPTER VI.

CROUP. (*Cynanche Trachealis*.)

DESCRIPTION.

THIS is an acute inflammation of the mucous membrane of the trachea, or wind-pipe, characterized by fever, cough and hoarseness, difficulty of breathing, with a considerable degree of spasmodic affection.

CAUSES.

The usual causes of croup, are cold, exposure to a damp atmosphere,

and whatever checks perspiration. It prevails chiefly in winter and spring.

SYMPTOMS.

The symptoms of this complaint are difficulty of breathing, and a peculiar whistling noise. It is attended with a cough, which generally increases until it becomes very troublesome. It occurs in paroxysms, which agitate the whole frame, great thirst, restlessness, and expectoration of mucus, which is raised with a great deal of difficulty. The head is thrown back in great agony, as if attempting to escape suffocation. The cough is generally dry; but if any thing is spit up, it has either a purulent appearance, or seems to consist of films resembling portions of a membrane. Where great nausea and frequent retchings prevail, coagulated matter of the same nature is brought up. There is an uneasy sense of heat over the whole body, a continual inclination to change from place to place, and frequency of the pulse. Very often the symptoms suffer considerable, and sudden remissions and exacerbations take place.

In an advanced stage of the disease, respiration becomes more stridulous, and is performed with still greater difficulty and some degree of spasmodic affection being repeated at longer periods, and with greater exertions, until at last it ceases entirely.

The disease has in a few instances terminated fatally within twenty-four hours; but more generally, when it proves fatal, it runs on to the fourth or fifth day. In this disease great quantities of lymph are poured out into the trachea or wind-pipe, and bronchial tubes, larynx, &c. which produce the suffocation, and many other symptoms attending it.

COMMON TREATMENT.

Bleeding, blistering, mercury, and antimony. It is no cause of wonder that so many die of this disease, under such pernicious treatment. The poor little victims of this complaint, are tortured by excoriating blisters, bleeding from the arm, with copious portions of mercury!!

REFORMED PRACTICE.

Indications of Cure.—Prompt means should be taken to lessen increased action of the mucous membrane of the trachea, larynx, and bronchiæ. To accomplish these means, it will be necessary to bathe the feet in weak ley. Give the following tincture:

Tincture of Eye Bright, or Emetic Plant, (*Lobelia Inflata*.)

Do. of Blood Root, (*Sanguinaria Lanadensis*.) Equal parts. Mix.

To a child of one year old, give a common sized teaspoonful every half hour until gentle vomiting takes place. This acts with peculiar force upon the trachea, separating or removing the effusion of lymph collected there, by which the breathing becomes easy, and all the symptoms more favorable. This must be repeated occasionally, or as often as there are any returns of the severe symptoms or paroxysms.

A *Purgative* may be given a short time after the operation of the emetic, which may be repeated every day, until the symptoms abate.

Expectorants.—Should there be great difficulty of expectoration, the following syrup may be given:

Take Seneca Root, (*Polygela Seneka.*)

Squills. Of each half a pound.

Water, eight pounds.

Boil it slowly till the water is half consumed.

Strain off the liquor and add strained Honey, four pounds.

Then boil to six pounds, or the consistence of a syrup.

To every pound of this syrup, add one quarter of a pound of Tincture of Lobelia.

An ordinary sized teaspoonful may be given to a child one year old, as often as a paroxysm of coughing occurs, *particularly* if the mucus is discharged with difficulty. This acts as an *expectorant*, *diaphoretic*, and *laxative*.

If the cough proves very troublesome, give occasionally a teaspoonful of the syrup of garlic. Should not this preparation diminish it in a reasonable time, administer the *Pulmonary Balsam*, according to the directions given. If there is much febrile excitement, let the surface be occasionally bathed, and *mustard plasters* applied to the feet and between the shoulders.

Case 1.—A child of Mr. —, aged about nine months, was severely attacked with the croup. The symptoms were fever, cough, wheezing, and difficulty of respiration, great distress and restlessness, spasmodic affection. All the ordinary means had been used without effect. The treatment recommended above was pursued, which soon arrested all the symptoms, and in a few days the child was well.

Case 2.—I was called to a child aged about two years, residing in Essex-street, which was apparently dying with the croup. There was such an accumulation of mucus in the trachea and bronchiæ, that breathing was almost entirely stopped, with all the most violent symptoms of croup. The treatment of the attending physicians had been of no service; indeed, it seemed past recovery. I first gave a dose of the tincture of lobelia, which, in fifteen or twenty minutes, produced nausea and gentle vomiting. A large quantity of tough, viscid mucus was discharged, which mitigated the symptoms. The breathing became easier, the spasms and cough subsided, and the child soon recovered. The relief afforded in this case, was a subject of astonishment to every one acquainted with the case. The treatment, in other respects, was the same as mentioned above. Hundreds of other cases of a similar nature might be mentioned.

CHAPTER VII.

INFLAMMATION OF THE PHARYNX, (*Cynanche Pharyngea*.)

DESCRIPTION.

THIS differs from quinsy only in the seat of the inflammation. It is of the same nature, is produced by the same causes, and requires a similar treatment.

CHAPTER VIII.

INFLAMMATION OF THE LARYNX, (*Cynanche Laryngea*.)

DESCRIPTION.

THIS is a disease of the mucous membrane investing the epiglottis and margin of the glottis serumis effused under it. It is of a local nature, very acute, and of short duration. It is very similar to the croup, and has often been confounded with it.

CAUSES.

The usual causes are exposure to cold, which excites an inflammation of the membrane investing the larynx.

SYMPTOMS.

It comes on with chilliness, succeeded by heat and fever, which are soon followed with a hoarseness and indistinctness of voice, laborious respiration and pain, or, as it were, a stricture in the throat threatening suffocation; the pulse is quick and feeble; the eyes are suffused with blood, and somewhat protruding; the countenance has a livid or swollen appearance; the tongue is furred; the tonsils, uvula, and pharynx, presenting a dark red appearance on inspection, and any attempt to swallow is succeeded by excruciating pain and difficulty. If the symptoms are not properly attended to, and subdued by an immediate adoption of active and proper means, the patient is destroyed by suffocation.

COMMON PRACTICE.

Bleeding, blistering, and antimony.

REFORMED PRACTICE.

Indications of Cure.—Subdue the local inflammation as quick as possible. If the subject be an adult, let him inhale the steam of the decoction recommended under the head of quinsy. Administer an emetic; (*tincture of lobelia*) afterwards give a purgative, and in other respects, pursue the same treatment as in quinsy.

CHAPTER VII.

INFLAMMATION OF THE BRONCHIAL TUBES, (*Bronchitis*.)

DESCRIPTION.

THIS is an inflammation of the mucous membrane of the bronchia or bronchial tubes. It is either chronic or acute. The acute stage very much resembles pneumonia, or inflammation of the lungs. As this disease is sometimes difficult to discriminate, we shall give a short description of the structure of the parts:—From the larynx the canal begins to take the name of trachea, and extends from thence as far down as the fourth or fifth vertebræ of the back, where it divides into two branches, which are the right and left bronchial tubes. Each of these bronchia ramifies through the substance of that lobe of the lungs, to which it is distributed by an infinite number of branches, which are formed of cartilages separated from each other like those of the trachea, by an intervening membranous and ligamentary substance. Each of these cartilages is of an annular figure; and as they become gradually less and less in their diameter, the lower ones are in some measure received into those above them, when the lungs, after being inflated, gradually collapse by the air being pushed out from them in expiration. As the branches of the bronchia become more minute, their cartilages become more and more annular and membranous, till at length they become perfectly membranous, and ramify through the lungs.

CAUSES.

The same as inflammation of the lungs.

SYMPTOMS.

It is frequent in cold and variable climates. In its simplest forms it constitutes those protracted, catarrhal affections, which are so common during winter in old persons, especially in those who are predisposed to colds and coughs. The acute bronchitis generally commences, like a common cold or catarrh, with lassitude, chillings, slight cough, oppression, and tightness of the chest, with some fever. As the disease increases, these symptoms increase, great anxiety of the countenance, respiration more laborious, attended with a wheezing or ratling sound, as if the air were forced through a narrow aperture, clogged with a viscid fluid. It is generally attended with hoarseness, respiration is more difficult in the recumbent than in the erect position. At first the cough is dry, but afterwards a copious secretion of viscid, transparent mucus, resembling the white of eggs, soon occurs, and with it considerable abatement of the violence of the cough ensues. But when the inflammation is about terminating, without suppuration, the matter ex-

pectorated loses its transparency, and becomes mixed with yellowish, white or greenish masses, which are scanty at first, but continue to increase more and more, until at last they compose the whole of the expectoration. A severe pain in the forehead, which is aggravated by coughing. When the secretion of mucus into the bronchia is very copious, and respiration is much obstructed, considerable drowsiness occurs. The tongue is white, and covered with transparent mucus; the skin is dry, and its temperature generally, but very little above the natural standard. The blood is commonly buffy, and sometimes cupped. Infants are especially liable to this affection. In them the disease manifests itself by a short, quick, oppressed, and wheezing respiration; uneasiness by being placed in the recumbent position; slight cough, somewhat hoarse at first, but humid and rattling as the disease advances; *a uniformly pale and anxious countenance*; pulse frequent and tense; skin above the natural temperature on the trunk, but the hands and feet are cool, or about the regular temperature. The respiration varies greatly; occasionally it becomes easy and free, and then suddenly becomes alarmingly oppressed, threatening instant suffocation. The progress of the disease is usually rapid. If it is not arrested, the breathing becomes more and more oppressed; "the child falls into a comatose state, a slightly livid tinge makes its appearance on the lips, from which the pallid cheeks are not entirely free. But even at this late period, gleams of hope sometimes burst upon us. For a short time the difficulty of respiration may seem to subside, and the child to be better. But these hopes are seldom realized; for even the next exacerbation may terminate in suffocation." The disease sometimes terminates fatally as early as the third day, though more commonly its course is protracted to the fifth or sixth day. Acute bronchitis is always attended with great debility. In some instances it is complicated with a disease of the liver. Cases of this kind, besides these symptoms, are attended with pain, tenderness, and fulness of the right side, oppression, nausea, bitter taste, vertigo, head-ache, with dark coloured and fetid discharges from the bowels.

This complaint is very similar to the croup or hives, and it is often very difficult to discriminate between them.

COMMON TREATMENT.

Bleeding, blistering, antimony, &c.

REFORMED PRACTICE.

In the acute bronchitis, *Emetics* and *Sudorifics* are the only anchors of hope. The following mixture may be given:—

1. Tincture of Emetic Plant, (*Lobelia Inflata*.)
 2. Tincture of Blood-Root, (*Sanguinaria Canadensis*.)
- Equal parss. Mix.

For an infant, or a child of one year old, give an ordinary sized tea-spoon full every half hour, till vomiting is produced. This may be repeated as often as there is an accumulation of mucus in the bronchial

vessels, with difficulty of expectoration, respiration, &c. Twenty-five drops of the Sweating, or *Sudorific Drops*, may afterwards be given in tea of any kind, every hour, until a moisture or perspiration is produced. The surface must be frequently bathed with warm water, to which ley has been added. The feet must also be frequently bathed, and *Sinapisms* applied.

Purgatives to be administered, to keep the bowels gently open.—To relieve the cough, give a strong decoction of *Hoarhound*, sweetened with honey.

CHRONIC INFLAMMATION OF THE BRONCHIA.

This is often the result of acute bronchitis. It is characterised by a troublesome cough, attended with a copious expectoration of viscid, purulent, or a whitish frothy matter; uneasy and somewhat oppressed respiration, accompanied at times with wheezing; more or less weight and uneasiness at the pit of the stomach; loss of appetite; a slightly furred tongue; irregular action of the bowels; a quick and irritated pulse, particularly towards evening; and deep red and scanty urine. The coughing usually occurs in fits of considerable violence, being almost always most severe in the morning on rising from bed, or on passing from warm to a cold air. Sudden atmospheric vicissitudes, also, seldom fail to increase the violence and frequency of the spells of coughing; and the same effect is usually produced by the inhalation of various vapours, fine dust, and occasionally by the act of swallowing food. Sometimes slight transient pains are felt in the chest; but more frequently no painful sensations whatever are experienced, except immediately after a fit of coughing, when a general aching pain is left for a few moments in the breast.

DIAGNOSIS.

The following diagnostic circumstances between chronic bronchitis, in the early period of its course, and tubercular phthisis or consumption, will in general enable us to distinguish these two affections from each other. In chronic bronchitis, the face is generally pallid, and the lips of a bluish hue. In tubercular consumption the lips are red, and the cheeks more constantly flushed. “In the beginning of chronic inflammation of the bronchia, the hands and feet are often cold, and the temperature of the surface altogether more variable than in tubercular consumption.” More or less inflammation and soreness usually occurs in the upper portion of the pharynx, during the early period of chronic bronchitis, which is very rarely the case in tubercular phthisis. In the former affection the expectoration is free almost from the commencement, and continues to be blended with a large portion of transparent viscid mucous to the end of the disease. In tubercular consumption, on the other hand, the cough is for a long time short and dry.

DISSECTION.

The bronchial cells are usually found engorged with purulent matter, mixed with a bloody serous fluid, and a portion of frothy mucus

CAUSES.

Chronic inflammation of the mucous membrane of the bronchia may occur as the sequel of acute bronchitis. It most commonly, however, *arises from neglected catarrh*. It is the consequence sometimes of measles, of hepatic diseases, and of protracted disorders primarily located in the digestive organs. It may proceed directly from the vicissitudes of heat and cold, and from the inhalation of irritating vapours or particles of matter floating in the atmosphere. It occasionally occurs in consequence of hooping cough, particularly from taking cold while under the influence of this affection.

COMMON TREATMENT.

Bleeding, blistering, and calomel.

REFORMED PRACTICE.

In the chronic form of this complaint, emetics may likewise be given as directed in the acute species, but repeated only at longer intervals. They unload the viscid secretions with which the bronchial cells become gorged. The same decoction may likewise be given as recommended under that head.

From the sympathetic relation which exists between the skin and lining membrane of the bronchial tubes, it is necessary to keep up a regular action of the cutaneous vessels, for in the proportion as we increase the activity of these emunctories, so we lessen the influx of fluids to the lungs. Flannel and proper clothing should be worn to prevent the effects of cold and sudden atmospheric changes. When the cough is very troublesome two teaspoons full of the *syrup of white poppy* may be given to allay irritation. Great attention must be paid to the extremities that an equal circulation may be produced, by which the disease will be mitigated. A stimulating, or strengthening plaster may be worn upon the chest.

CHAPTER X.HOOPING COUGH, (*Pertussis*.)

DESCRIPTION.

THIS is a disease known by a convulsive, strangulating cough, with hooping, returning by fits that are usually terminated by vomiting. Children are most commonly the subjects of this disease, and it seems to depend on a specific contagion, which affects them but once in their life. The disease being once produced, the fits of coughing are often repeated without any evident causes; but, in many cases, the contagion may be considered as only giving the predisposition, and the frequency of the fits may depend upon various exciting causes, such as violent exercise, a full meal, the having taken food of difficult digestion, and irritation of the lungs by dust, smoke, or disagreeable odours. Emotions of the mind may likewise prove an exciting cause.

CAUSES.

It is evidently produced by contagion. Its proximate or immediate cause seems to be a viscid matter or phlegm lodged about the bronchia, trachea, and fauces, which sticks so close as to be expectorated with the greatest difficulty. Some have supposed it to be a morbid irritability of the stomach, with increased action of its mucous glands; but the affection of the stomach which takes place in the disease, is clearly only of a secondary nature, so that this opinion must be erroneous.

SYMPTOMS.

The hooping-cough usually comes on with a difficulty of breathing, some degree of thirst, a quick pulse, and other slight febrile symptoms, which are succeeded by a hoarseness, cough, and difficulty of expectoration. These symptoms continue perhaps for a fortnight or more, at the end of which time the disease puts on its peculiar and characteristic form, and is now evident, as the cough becomes convulsive, and is attended with a sound, which has been called a hoop.

When the sonorous inspiration has happened, the coughing is again renewed, and continues in the same manner as before, till either a quantity of mucus is thrown up from the lungs, or the contents of the stomach are evacuated by vomiting. The fit is then terminated, and the patient remains free from any other for some time, and shortly afterward returns to the amusements he was employed in before the fit, expresses a desire for food, and when it is given to him, takes it greedily. In those cases, however, where the attack has been severe, he often seems much fatigued, makes quick inspirations, and falls into a faint.

On the first coming on of the disease, there is little or no expectoration; or if any, it consists only of thin mucus; and as long as this is the case, the fits of coughing are frequent, and of considerable duration; but on the expectoration becoming free and copious, the fits of coughing are less frequent, as well as of shorter duration.

By the violence of coughing, the free transmission of blood through the lungs is somewhat interrupted, as likewise the free return of the blood from the head, which produces that turgescence and suffusion of the face, which commonly attend the attack, and in some instances brings on a hæmorrhage either from the nose or ears.

The disease having arrived at its height, usually continues for some weeks longer, and at length goes off gradually. In some cases it is, however, protracted for several months, or even a year, and sometimes terminates in other complaints.

PROGNOSIS.

Although the hooping-cough often proves tedious, and is liable to return with violence on any fresh exposure to cold, when not entirely removed, it nevertheless is seldom fatal, except to very young children, who are always likely to suffer more from it than those of a more advanced age. The danger seems indeed always to be in proportion to the youth of the person, and the degree of fever, and difficulty of breathing, which accompany the disease, as likewise the state of debility which prevails.

It has been known in some instances to terminate in apoplexy and suffocation. If the fits are put an end to by vomiting, it may be regarded as a favourable symptom, as may likewise the taking place of a moderate and free expectoration, or the ensuing of a slight hæmorrhage from the nose or ears.

DISSECTION.

Directions of those who die of the whooping-cough, usually show the consequence of the organs of respiration being affected, and particularly those parts which are the seat of catarrh. When the disease has been long protracted, it is apt to degenerate into pulmonary consumption, asthma, or visceral obstructions, in which last case the glands of the mesentery are found in a hard and enlarged state.

COMMON TREATMENT.

Squills, antimony, bleeding, &c.

REFORMED PRACTICE.

Emetics.—It is generally reckoned a favourable symptom when a fit of coughing makes the patient vomit. This cleanses the stomach, and greatly relieves the cough. It will therefore be proper to promote this discharge, by giving a *Lobelia Emetic*.

Emetics not only cleanse the stomach, which in this disease is generally loaded with viscid phlegm, but they likewise promote perspiration and the other secretions, and ought therefore to be repeated according to the obstinacy of the disease. They should not however be strong; gentle vomits frequently repeated are both less dangerous and more beneficial than strong ones.

For this purpose a teaspoonfull of the *Tincture of Lobelia*, may be given to a child a year old, in any kind of tea sweetened, every half hour till it operates as a gentle emetic. It may be repeated whenever a fit of coughing occurs, and there is a sense of suffocation, or if there is great debility, or the attack is not very severe, a sufficient quantity may be given to loosen the mucus or phlegm, and to cause the child to breathe freely.

The following syrup may be given:

Elecampane root and honey, 4 oz. of the root to half a pint of honey.

Bake it in a well glazed earthen pot in an oven heated. If the root be green it needs no water, if dry add half a pint of water. A tea spoonful of the syrup to be given occasionally, or three times a day.

Opiates are sometimes necessary to allay the violence of the cough. For this purpose, a little of the syrup of poppies, according to the age of the patient, may be taken in a cup of hyssop or pennyroyal tea, and repeated occasionally.

Laxatives.—The bowels must be kept freely open by gentle laxatives. A good medicine for this purpose, is the *cold pressed Castor Oil*, mixed with a little milk sweetened. A tea spoonful or two may be given to a child one year old two or three times a day, as there is occasion. For those that are older, the dose must be increased, and repeated till it has

the desired effect. Those who cannot be in this manner induced to take the castor oil, may have it mixed with a little syrup or currant jelly to disguise the taste. Most children are fond of syrups and jellies, and seldom refuse a disagreeable medicine when mixed with them.

The *Feet* must be bathed in warm ley water every night, and draughts or sinapisms applied.

REGIMEN.

Whatever injures the digestion, obstructs the perspiration, or relaxes the solids, disposes to this disease; consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and at the same time promoting perspiration, and the different secretions.

The diet must be light and of easy digestion; for children, good bread made into pap or pudding, chicken-broth, with other light spoon-meats, are proper; but those who are farther advanced may be allowed gruel, and if the fever be not high, a little boiled chicken. The drink may be hyssop, or pennyroyal tea, sweetened with honey or sugar-candy, small wine-whey, or, if the patient be weak, he may sometimes be allowed a little wine.

One of the most effectual remedies in the whooping-cough is change of air. This often removes the malady, even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the complaint prevailing in one town or village, when another at a very small distance is quite free from it. The feet should be frequently bathed in lukewarm water, and a sweating or strengthening plaster kept constantly between the shoulders.

CHAPTER XI.

CATARRH OR INFLUENZA, (*Tussis Epidemicus.*)

DESCRIPTION.

THIS is an epidemical disease which occasionally prevails, and sometimes affects nine-tenths of the inhabitants of Europe and America.—It is an increased secretion of mucus from the membranes of the nose, fauces and bronchia with fever, and attended with sneezing, cough, thirst, lassitude and want of appetite.

CAUSES.

A species of catarrh, to which the name of Influenza has been applied, sometimes makes its appearance; and considering the manner in which the epidemic infection of this disease occasionally spreads, even over

whole countries, in the space of a very short time, it is evident that it is conveyed by a current of the atmosphere, and derives its origin from some casual source capable of impregnating the air which we breathe with the specific poison of the malady.

Catarrh and Influenza are not accompanied with danger, when appearing under a mild form, and properly attended to at an early period; but when connected with highly inflammatory symptoms, and these are not counteracted at the commencement by appropriate means, or there is a predisposition in the constitution to consumption, or a tendency to asthma, unfavourable consequences may result therefrom.

SYMPTOMS.

It commences by sneezing, coughing, hawking, chills succeeded by heat, hoarseness, soreness and rawness of the throat, lungs and stomach. There is an expectoration of mucus, pain of the head, chest, back, shoulders, and forehead. The eyes are red, and there is great weakness and debility. The cough is often attended with great difficulty of expectoration.

As before intimated it seldom proves fatal, but in some epidemics the attack has been so universal as to occasion great mortality. Towards the close of the year eighteen hundred and thirty-one, and commencement of eighteen hundred and thirty-two, it prevailed throughout the United States, and proved very mortal upon those principally, who were aged, or were subject to some other complaint. It swept off many of our most distinguished inhabitants.

TREATMENT.

In general the vapour bath alone, will soon remove it. It may be repeated every other day; at the same time the feet must be bathed; and warm teas drank, made of *Boneset* or *Hoarhound*, until perspiration is promoted.

A teaspoonful of the tincture of *Lobelia*, may be taken every morning; and if the cough prove troublesome, a tea spoonful of the syrup of *White Poppy*, may be given. A purgative also may be occasionally taken.

REGIMEN.

The diet should be light, and taken in moderate quantities; liquids are preferable. This treatment will be found very effectual in the catarrh and influenza.

CHAPTER XII.

COLDS AND COUGHS, (*Tussis*.)

DESCRIPTION.

THE inhabitants of every climate are liable to take cold when the seasons are variable, and there are sudden and considerable changes in the surrounding atmosphere. These are chiefly the subjects of it who are of a delicate constitution; whose employments expose them to quick transitions from great heat to a very reduced temperature, and who have a morbid susceptibility to the impression of cold, and are disposed to coughs.

Most persons affect to despise colds, and as long as they can crawl about, scorn to be confined by what they call a *common cold*. Hence it is that colds destroy such numbers of mankind. Like an enemy despised, they gather strength from delay, till at length they become invincible.

CAUSES.

The application of cold to the body, giving a check to perspiration, is the general cause of these complaints.

SYMPTOMS.

A cold is usually accompanied with a weight and pain in the head, oppression at the chest, and some difficulty of breathing, a sense of fullness and stopping of the nose, watery inflamed eyes, soreness of the throat, cough, pains about the chest, cold shiverings succeeded by transient flushes of heat, rheumatic pains in the neck and other parts of the body, an increased secretion of mucous from the nose, throat, and lungs, in consequence of a slight inflammation of the mucous membrane of these parts, and in many instances with some degree of fever.

Common Cough.—A cough is generally the effect of a cold, which has either been improperly treated, or entirely neglected. When it proves obstinate, there is always reason to fear the consequences, as this shows a weak state of the lungs, and is often the forerunner of consumption.

TREATMENT.

1. Bathe the feet in blood warm water.
2. Use the *Vapour Bath* as directed under that head.
3. Give or take an infusion, or tea of common *hoarhound* and *bone set*, sweetened with honey.
4. Give a dose of physic.
5. If the cough is troublesome, particularly at night, give a tea-spoonful of *paregoric*, or *syrup of poppies*.

Should the cough return after using the above means, an *emetic* may be taken, and afterwards the following mixture :

Take Oil of Anise, half a drachm,
 Oil of Almonds, half a drachm,
 Balsam of Fir, half a drachm,
 Tincture balsam of Polu, half a drachm,
 Wine, half an ounce. Mix.

Twenty drops 3 or 4 times a day to be given in a little mucilage or tea. This treatment will be found very effectual for colds or coughs; and which, if properly applied, will prevent the consumption.

Also, a mixture of honey, vinegar, and butter melted, and a tea-spoonful taken often.

The following syrup is very valuable for every kind of cough:

One ounce Elecampane Root,
 One ounce Comfrey Root,
 One ounce Spignard Root,
 One ounce Hoarhound, the herb.
 Half ounce Wild Cherry Tree Bark,

To be simmered in three pints of water down to one pint, then strained, to which add one pound of brown sugar; strain again, and add half a pint of old Jamaica rum. Take half a wine glass, morning, noon, and particularly at night, on retiring to rest. This has cured many apparently in the consumption.

REGIMEN.

When a person finds himself much indisposed from any exposure to cold, he ought immediately to put himself on a light, spare diet, abstaining from the usual quantity of animal food at least, and from all fermented and spirituous liquors, together with every thing that is likely to heat and inflame the body. The best food for him will be gruel, weak broths, bread puddings, roasted apples, and the like; and the most appropriate drink will be barley water. The patient in particular should avoid eating any supper except gruel, with a little bread. It will likewise be advisable that he be confined to the house, and not expose himself to the external atmosphere; he should also be warmly clothed.

Previous to his going to bed, he had better put his feet into warm water and ley for ten or twelve minutes, and after having them well wiped, he should take freely of *hoarhound*, and as a change, *boneset* tea very warm at bed time, and cold through the day; and covering himself in bed with sufficient clothes, so as to excite a proper perspiration throughout the night. The next morning he ought to continue in bed longer than usual.

PREVENTION.

Persons liable to coughs from any little exposure to cold, should wear flannel next to the skin, but particularly over the chest; they should adapt their clothing to the vicissitudes of the weather, and they should be cautious how they expose themselves too quickly to the external air when heated by exercise or crowded rooms.

CHAPTER XIII.

ASTHMA, (*Asthma*.)

DESCRIPTION.

ASTHMA is an affection of the lungs, or the bronchial vessels, generally of a spasmodic nature, that occurs in paroxysms which take place usually at night. It is characterized by frequent, difficult, and short respiration, wheezing, stricture of the chest, and a cough, all which symptoms are aggravated when in a recumbent position. It more generally attacks those of a full, or plethoric habit.

When there is a great discharge of mucus from the lungs it is termed *humid*; but when it is attended by little or no expectoration, it is termed the *dry*, or Spasmodic Asthma. It more generally attacks men than women.

CAUSES.

Asthma, but more particularly the spasmodic, is brought on by almost every thing which increases the action of the heart; and which stimulates and fills the vessels of the mucous membrane. Thus it is produced by intense heat, by lightness of air, by severe exercise, by strong mental emotions, by full meals, by stimulating drinks, by exposure to cold and atmospherical influence, and by certain effluvia, as those of hay, whether new or old, of sealing wax, and other burning substances.

Congestions of blood, or of serous humours in the lungs, noxious vapours arising from a decomposition of lead or arsenic, impure and smoky air, cold and foggy atmosphere, sudden changes of temperature, scrofulous, rheumatic, gouty, and scorbutic acrimony; dyspepsia, or irritation in some of the abdominal viscera, but particularly in the stomach: irritation of the bronchial system by aerial acrimony, or other causes, suppression of long-accustomed evacuations, frequent catarrhal attacks, gout, general debility, water in the chest, aneurisms, polypi, or concretions of grumous blood in the large vessels, and the like, are the causes from which this formidable disease may arise in different individuals. In some instances it proceeds from an hereditary predisposition, and in others from mal-conformation of the chest.

Asthma having once taken place, its fits are apt to return periodically, and more especially when excited by certain causes, such as by a sudden change from cold to warm weather, or from a heavier to a lighter atmosphere; by severe exercise of any kind which quickens the circulation of the blood; by an increased bulk of the stomach, either from too full a meal or from a collection of air in it; by exposure to cold, obstructing the perspiration, and thereby favouring an accumulation of blood in the lungs; by violent passions of the mind; by disagreeable odours; and by irritations of smoke, dust, and other subtle particles floating in the air.

The bronchial vessels seem very much concerned in the production of this disease. It is the large quantity of mucus secreted and collected in them, which appears to be the proximate cause of the suffocation, and difficulty of breathing which attends the complaint, by preventing the free admission of air into the lungs.

SYMPTOMS.

There is often some degree of warning given of the approach of an asthmatic paroxysm, not by pulmonary symptoms, but by those of indigestion, heartburn, flatus, itching of the skin, pain over the eyes and sleepiness. The attack most commonly occurs at night and the patient is perhaps awaked out of his sleep by it. To those who experience or witness a paroxysm of asthma for the first time, it appears one of the most formidable diseases to which man is liable. The patient is oppressed by a tightness across the breast, which so impedes respiration, as to threaten the immediate extinction of life. He starts up into an erect posture, and flies to the window for air. For a considerable time his breathing is performed by gasps, slowly and with a wheezing noise; speaking is difficult and even painful to him; there is often present also a propensity to coughing.

In this state of urgent distress the patient continues till the approach of morning, when a remission commonly takes place. However suddenly the fit began, it always goes off slowly. By degrees the breathing becomes less laborious, and coughing and speaking are performed with greater ease. In the generality of cases a copious expectoration of mucus at length takes place, and with it the paroxysm ceases, and the patient falls asleep. During the fit the pulse usually continues of the natural standard, the surface of the body is pale, the muscles appear shrunk, and there is a considerable flow of limpid urine. In a few cases expectoration is very scanty.

During the next day, the asthmatic experiences some remaining sense of stricture across the breast, and any exertion of the body increases his uneasiness. At night the urgent difficulty of breathing returns, and in this manner he is harassed for three or four successive days; after which, the symptoms gradually yielding, he enjoys his usual rest without further disturbance. This terminates the paroxysm of asthma.

When it has once taken place, the disease is apt to recur periodically, and when the asthmatic disposition is very strong, to be brought on at all times by some of the circumstances enumerated. A degree of difficulty of breathing, particularly on ascending a hill or flight of steps, is never wanting during the intervals, and respiration is always attended more or less with *wheezing*; that is, with a morbid accumulation of mucus in the bronchial tubes. Persons subject to asthma acquire a peculiar expression of countenance easily recognized when once observed.

COMMON TREATMENT.

Bleeding, blistering, tartar emetic, digitalis, Prussic acid, &c.

REFORMED PRACTICE.

During a paroxysm, or fit of the asthma, the patient must be placed in

an erect position, and his feet immediately immersed in warm *ley water*, and *sinapisms* applied, with a view to equalize the circulation, or to divert the blood or humours from the lungs and bronchial vessels. An infusion of *catnip* or *pennyroyal* may be given at the same time to excite gentle perspiration, which course will soon afford relief. Should the paroxysm, however, be very severe, attended with a sense of suffocation, &c. administer immediately in a cup of warm tea, an ordinary sized table-spoonful of the *Tincture of Lobelia*, to be repeated every half hour if the first portion does not afford relief.

This medicine exerts the most astonishing effects in this complaint. It is no sooner introduced into the stomach, than the tension and spasm is removed, by dislodging collections of mucus in the bronchial vessels, and thereby giving free admissions of air into the lungs; and it is invariably attended with a salutary effect. I have been called when patients have been pronounced past recovery, when they have been thought to be dying, and upon the exhibition of this plant, an immediate amendment has taken place. I recollect one case where a young woman appeared to be nearly gone with the disease, after having been attended by another physician, who had administered antimony without any benefit. I gave only an infusion of the plant as it was gathered, not having been pulverized. I commenced with table-spoonful doses; the first afforded relief, and after repeating it a few times, the paroxysm subsided, and she soon recovered. The other physician afterwards called in, and upon being shown the simple article I made use of, he cried out with indignation, "O! it is nothing but the Indian tobacco," a name given it by some.

Another case now occurs to me, where two or three physicians had been attending a boy who was nearly suffocated with the asthma, croup, or similar disease, and he was pronounced hopeless. They called frequently, and asked "if he was not yet dead." In this condition I was called to visit him, but so near his end did he appear to be, that I thought it entirely useless to prescribe for him; but as an experiment, I directed some of the *tincture of lobelia* to be given, which was done after my departure, but having no hopes of his recovery, I did not again call to see him, supposing that he could not survive but a few hours. Six months after this, a person who was acquainted with the family, asked me if I had ever heard of the fate of the boy for whom I had prescribed. I told him I had not, but I supposed that he was dead. He informed me that he was alive and well; that the medicine that I left, was given, and that it almost immediately caused him to breathe easier, mitigated the symptoms, and in a short time cured him.

Hundreds of cases might be mentioned of a similar nature.

The virtues of lobelia are unquestionably very extraordinary in many complaints, but in none more so than asthma, croup, &c.; much discretion and judgment, however, is necessary in the administration of it.

Having suspended the paroxysm, the next step will be to effect a radical cure; and this is seldom done, for the reason that asthmatic patients generally discontinue the medicines when they become comfortable. But when the patient wishes a cure effected, he must persevere in the use of

proper means. It will be necessary for him to repeat the dose of the tincture, or powder of *lobelia*, once or twice a week, in doses sufficient to excite general vomiting.

He must also, occasionally, take a *purgative*.

During the intermissions, and when the patient is afflicted only with cough, difficulty of breathing, &c. the following medicine may be taken:

Take Liverwort, (*Hepatica Triloba*,) a quarter of a pound.

Solomon's Seal, (*Conv. Multiflora*,) a quarter of a pound.

Skunk Cabbage, (*Icterodes Foetida*,) a quarter of a pound.

Water Hoarhound, (*Lycopus Virginiana*) a quarter of a pound.

Blood root, (*Sanguinaria Canadensis*,) two ounces.

Bruise and add a sufficient quantity of water. Boil until the strength is extracted, strain and continue to boil until there is four quarts of the liquid, strain and add 5 lbs. of honey and half a pint of brandy. Let it settle, and it is fit for use. Of this let a wine glass be taken three or four times a day.

During the time that this is taken, give an infusion of *Hoarhound* warm at night, and cold through the day.

It will be necessary to keep a determination to the surface, by giving diaphoretic medicines.

A strengthening plaster may be worn upon the breast and between the shoulders, to divert the humours from the lungs.

When there is difficulty of breathing, from an accumulation of mucus, give expectorants.

The following is good:

Take half an ounce of Blood root,
half an ounce of Lobelia,
half an ounce of Pleurisy Root,

Bruise all, and add one quart of Metheglin, or Wine.

A table-spoonful or two may be given, occasionally.

As occasion requires, the stimulating, or capsicum pill is attended with much benefit in asthma; 2 or 3 at a time may be administered, morning, noon, and night.

A lady of this city, who has been for many years afflicted with the asthma, (apparently spasmodic) and had tried almost every kind of medicine, could find no relief from any except the following:—

Take Ether,
Tincture of Castor,
Tincture of Opium, (*laudanum*)
Equal parts. Mix.

A tea-spoonful to be taken whenever the symptoms are urgent.

REGIMEN.

The patient by all means should breathe a pure air. He should avoid smoke, dust, &c. He should lay upon a straw mattress with his head elevated. A spare diet to be used, chiefly vegetables, milk, &c.

CHAPTER. XIV.

INFLAMMATION OF THE LUNGS, (*Pneumonia.*)

DESCRIPTION.

WHEN the mucous membrane lining the lungs, or the substance of the lungs are inflamed, it is termed *pneumonia*, or an inflammation of the lungs. When any part of the contents of the thorax is inflamed, it is termed by some pneumonia; by some peripneumony. This disease attacks all classes, and is extremely prevalent. Children are very liable to it.

CAUSES.

The most general cause of this disease is the application of cold to the body, which gives a check to the perspiration, and determines a great flow of blood to the lungs. It attacks principally those of a robust constitution and plethoric habit, and occurs most frequently in the winter season and spring of the year: but it may arise in either of the other seasons, when there are sudden vicissitudes from heat to cold.

Other causes, such as violent exertions in singing, speaking, or playing on wind instruments, by producing an increased action of the lungs, have been known to occasion inflammation of this organ. Those who have laboured under a former attack of this complaint, are much predisposed to returns of it.

SYMPTOMS.

Inflammation of the lungs comes on with an obtuse pain in the chest or side, great difficulty of breathing, (particularly in a recumbent position, or when lying on the side affected,) together with a cough, dryness of the skin, heat, anxiety, and thirst. At the first commencement of the disease the pulse is usually full, strong, hard, and frequent, but in a more advanced stage it is commonly weak, soft, and often irregular. In the beginning, the cough is frequently dry and without expectoration; but in some cases it is moist, even from the first, and the matter spit up is various both in colour and in consistence, and is often streaked with blood.

If relief is not afforded in time, and the inflammation proceeds with such violence as to endanger suffocation, the vessels of the neck will become turgid and swelled; the face will alter to a purple colour; an effusion of blood will take place into the cellular substance of the lungs, so as to impede the circulation through that organ, and the patient will soon be deprived of life.

If these violent symptoms do not arise, and the proper means of subduing the inflammation have either been neglected, or have proved

ineffectual, although adopted at an early period of the disease, a suppuration may ensue, which event is to be known by frequent slight shiverings, and an abatement of the pain and sense of fullness in the part, and by the patient being able to lie on the side which was affected, without experiencing great uneasiness.

When pneumonia proves fatal, it is generally by an effusion of blood taking place in the cellular texture of the lungs, so as to occasion suffocation, which usually happens between the third and seventh days; but it may likewise prove fatal, by terminating either in suppuration or gangrene.

When it goes off by resolution, some very evident evacuation always attends it; such as a great flow of urine, with a copious sediment, diarrhoea, a sweat diffused over the whole body, or a hæmorrhage from the nose; but the evacuation which most frequently terminates the complaint, and which does it with the greatest effect, is a free and copious expectoration of thick white or yellow matter, slightly streaked with blood; and by this the disease is carried off generally in the course of ten or twelve days.

PROGNOSIS.

Our opinion as to the event is to be drawn from the symptoms which are present. A high degree of fever, attended with delirium, great difficulty of breathing, acute pain, and dry cough, denote great danger; on the contrary, an abatement of the febrile symptoms, and of the difficulty of breathing, and pain, taking place on the coming on of a free expectoration, or the happening of any other critical evacuation, promises fair for the recovery of the patient. A termination of the inflammation in suppuration is always to be considered as dangerous.

DISSECTION.

On dissection, the lungs usually appear inflamed; and there is often found an extravasation, either of blood, or of coagulable lymph, in their cellular substance. The same appearances likewise present themselves in the cavity of the thorax, and within the pericardium. The pleuri, connected with the lungs, is also in an inflated state, having its surface every where crowded with red vessels. Besides these, abscesses are frequently found in the substance of the lungs, as likewise tubercles and adhesions to the ribs are formed. A quantity of purulent matter is often discovered also in the bronchia. In the early period of this disease we may hope, by active measures, to bring about immediate resolution; but when it is more advanced, we must look for a discharge by expectoration, as the means of restoring the part to a healthy state.

COMMON PRACTICE.

Repeated and copious bleeding even to fainting, (*ad deliquium animi*.) mercury, salts, antimony, blistering, nitre, &c. Dr. H***** boasts of having bled a person in pneumonia, to the amount of two hundred ounces in two or three days. If an aged physician of the

old school, has pronounced Dr. R*** a "woful quack," in consequence of his sanguinary practice; with how much greater propriety might we pronounce this Dr. Sangrado a woful quack for such mal-practice. We should suppose that a man in his sober senses, with any pretensions to medical knowledge, could not be guilty of such consummate ignorance. Some might suppose that such practice would prove fatal by producing the consumption; but there is no fear of this, as it cuts short the life of the person too soon to induce this complaint.

REFORMED PRACTICE.

Indications of Cure.—The most prompt means should be used to reduce the inflammation, and remove the disease by resolution, or by preventing supuration.

In consequence of the vicissitudes of our atmosphere, this disease (inflammation of the lungs) is the greatest scourge of this country. It proves more fatal than the yellow fever, or any other epidemic, if not immediately, by its subsequent effects upon the system.

It is the practice universally among physicians to bleed in this, as well as other inflammatory diseases; but I have *invariably* succeeded in treating the worst species of the complaint, without ever having drawn one drop of the vital fluid; notwithstanding, it is asserted by authors, that the most dangerous consequences result from the neglect of bleeding. I know by experience that the disease is cured much sooner, and without endangering the life or health of the patient. The lives of thousands have been destroyed by the use of the lancet in this as well as other diseases.

Lieutaud, a celebrated Doctor and Physician to Louis XV. deprecates the practice of free bleeding in this disease. He says "that bleeding must be confined within certain limits, lest the strength necessary to promote expectoration, or any other effort of nature, should fail from too great depletion of the vessels. Every one knows that bleeding, even the smallest, are fatal in some epidemic constitutions. To this we may add, that by common consent, bleeding hinders supuration, which nature usually points to about the third or fourth day of the disease.

It is not to be denied, that many, not of inferior note, have followed a contrary method; who have, for instance, in every obvious inflammation of the breast, ordered bleeding ten or fifteen times, or even more. The young and athletic may bear this *astonishing loss of blood*, with success; but I have seen many afterwards relapse into phthisis or dropsy, after overcoming the inflammatory disease; to say nothing of many whose strength had been prostrated by this immoderate depletion of the vessels: where-by they became unequal to the promoting of expectoration, and were carried off by suffocation or gangrene."

In this, as well as other diseases, it will be necessary in the incipient or first stage of inflammation of the lungs, to produce free and copious perspiration, by administering *Sudorific Medicines*; and a very excellent method to answer this purpose, is to steam the patient over *bitter herbs*, as mentioned in other parts of this work, or by making use of the vapour bath. This may be resorted to if the strength of the patient will enable him to sit up; otherwise the *sudorific*, or *sweating drops* may be given in the usual manner, until the patient perspires freely for several hours,

and this must be continued moderately until the inflammation has subsided. This single operation will divert the blood from the lungs and prevent congestion, lessen the febrile excitement by equalizing the circulation, remove the pain, and favor expectoration. When the patient has recovered from the operation of free perspiration, a *purgative* may be given, and occasionally repeated during the disease. When the arterial action has diminished, mild *emetics* may be administered. They generally produce immediate relief from the oppression of the chest, cause a determination to the skin as well as a free expectoration. They expel the viscid mucus which fills the air cells of the lungs, restore respiration, and thereby increase the strength of the system. These may be repeated as often as the circumstances of the case justify. The *lobelia inflata* is the best medicine that can be administered.

It will be found very serviceable to inhale the steam of bitter herbs. The tension of the lungs is thus removed, and mucus expectorated with more freedom, and these may be repeated frequently through the day. When the arterial excitement has diminished, should the cough prove troublesome, one or two tea-spoonfuls of the *syrup of poppy*, or *paregoric* may be given. If these should not allay the cough sufficiently, give ten grains of *diaphoretic powders* at bed time, until rest or sleep is procured; To be repeated every night if necessary.

Expectorants.—If there is much accumulation of mucus, oppression at the chest, cough, &c. difficulty of breathing and expectoration, give the following preparation:

. Tincture of Blood root, (*Sanguinaria Canadensis*.)

Lobelia, (*Lobelia Inflata*.)

Skunk Cabbage, (*Ictodes Fœtida*.)

Of each equal parts. Mix.

Give a tea-spoonful in a gill of infusion of hoarhound occasionally, or as often as the lungs become clogged with mucus.

This preparation has the effect of lessening all the symptoms of the complaint. It acts as an expectorant, diaphoretic, &c.

Mustard Plasters.—When the inflammation is very acute, and the symptoms violent, a *Mustard Plaster* may be applied on the chest, till the skin becomes reddened, and when the inflammation has in some degree subsided, should the cough continue, use the *Vegetable Syrup* as recommended under the head of consumption. An infusion of *Hoarhound* and *Boneset* may be used through the day, sweetened with honey.

The patient may drink an infusion of *Flaxseed*, *Bran*, and *Slippery Elm*. These by their demulcent properties will be found singularly beneficial.

It will be particularly necessary in the acute stage of this disease to avoid the use of pectorals, syrup, and such medicines as possess bracing or tonic properties, except in conjunction with depletic means.

The inflammation must be in some degree first subsided, before these can be administered with a good effect.

The Feet must be daily immersed in warm *ley water*, 15 or 20 min-

utes at a time, and when removed wiped dry and *sinapisms* applied at night.

Should the pulse continue full, tense, and hard, after the patient has submitted to this treatment, or should not the inflammation gradually subside, then give the *Tincture of Fox Glove (Digitalis)*. 15 or 20 drops may be given morning, noon, evening, and bed time, in any kind of tea.

This plant increases the discharge of urine and thereby lessens inflammation. It lessens the circulation through the lungs, by diminishing the action of the heart and arteries, and is thus attended with a very favorable effect.

I am of opinion, says a practical Physician, that the digitalis may in all cases of active inflammation be most advantageously employed, and that much of the pabulum vitæ can by its aid be preserved. I have had lately under my care a man, who from a violent cold was seized with pneumonia, he was old, greatly enervated and had typhoid symptoms combined with it, and he without any inconvenience took in 24 hours, six grains of this powerful sedative, on the third day; which reduced his pulse to 75, and cured the inflammation.

A purgative must be administered every day or two according to the obstinacy or violence of the disease. It has a powerful tendency to lessen inflammation.

Pectorals.—Should the cough continue obstinate, or should it remain troublesome after the other symptoms have subsided, give the *Pulmonary Syrup*, or *Balsam*.

: REGIMEN.

The diet should be diluting, *light*, cooling, and nutritious. No kind is more *anti-phlogistic*, or cooling, while at the same time it is nourishing, than Indian-meal gruel. It is food, drink, and medicine in this disease, and in almost every other.

This course of treatment has proved an effectual and sovereign remedy in the worst form and stage of Pneumonia, or Inflammation of the Lungs, when the course now pursued by physicians sends the patient into the grave in a few days, or throws him into the consumption. None can realise the difference in the two kinds of practice except they witness it.

PNEUMONIA TYPHOIDES.

DESCRIPTION.

THIS disease is termed, by some, peripneumonia notha, pneumonia typhoides, bilious pneumonia, and malignant pleurisy. In the southern states, it is vulgarly called "cold plague, or cold skin fever," in consequence of the remarkable coldness of the surface and extremities, and its great mortality in some places and seasons. It is termed, *bilious* inflammation of the lungs, in consequence of the liver being affected in the disease. In the eastern states it is called "pneumonia typhoides,"

in consequence of its being a mixed disease,—in other words, the true peripneumony, or inflammation of the lungs, degenerating into typhus.

Huxham gives a very accurate description of this disease, as follows:—"Though the load of the breast is very great, breathing difficult, the cough very importunate, and sometimes violent; yet the fever and heat are small, many times scarcely perceptible, the pulse either quick, weak, and small, or sluggish and oppressed, never hard and tense. So that, as this distemper hath very different and quite contrary symptoms to those of a true peripneumony in several respects, it is reasonable to suppose it arises from very different causes, and requires a very different method of cure. And, in fact, we see, that bastard peripneumony commonly seize the old and phlegmatic, the weak and lax, the fat and unwieldy, and are most rife in wet, foggy weather, and winter seasons; whereas the true *Inflammatory Peripneumony* generally attacks the robust, vigorous, and active, and is most frequent in cold, dry weather, during north-east winds. These two diseases then seem to differ almost as much as ardent and slow nervous fever. A perpetual laborious wheezing, great anxiety, constant oppression of the chest, cold extremities, &c. are marks of immediate danger. When this disease comes upon a place, it is, with all the frequency and destruction of an epidemic disease, and unexpected deaths are terrible. The pulse is weak; the cough slight; the difficulty of breathing more anxious than painful; the face sunk in the features, and flushed, or rather of a livid colour, except when it is cadaverous, pale, and yellow. The suffocation is sudden; the lungs have, as Morgagni expresses it, a liver like, solid consistence: they have no longer the cellular appearance of lungs, for their bronchiæ are crammed with blood; their common cellular texture is also full of extended blood; they are dense, solid, and very heavy and black; the pulse small, feeble, and trembling. The disease has, in general, commenced with acute pain in the side or breast, stricture across the thorax, and difficulty of breathing; short, distressing cough, sometimes attended with a mucous expectoration, tinged with blood; numbness in the muscles, excruciating pains in the limbs and about the region of the heart, chills and great prostration of strength, together with palpitation, irregularity, depression, and annihilation of the pulse, syncope, and cold sweats; but in a few cases the pulse was very rapid, and not depressed. In some instances the patient was seized with a violent pain in the head, soon became delirious, and died in a few hours.—(See Spotted, or Petechial Fever.)

CAUSES.

Supposed to be epidemic, or produced by the various vicissitudes of climate. It prevails in the cold weather of winter and spring. Resembles very much, in its character, the spotted fever, by the violence and suddenness of its attack, the variety of its forms, sudden and great prostration of strength, its rapid progress, and fatal termination. The peripneumony notha was described by Sydenham, in 1680, under the name of *Bastard Peripneumony*, which, he says, arises every year towards the beginning, but more frequently towards the close of winter. It chiefly attacks such as are of a gross habit of body and middle-aged

persons, but oftener those who are more advanced in years, and "too much addicted to spirituous liquors, especially brandy."

TREATMENT.

Cold is often the most predominant symptom on the first attack of this disease. Hence, it will be necessary to excite perspiration as soon as possible; and the warm bath has been found remarkably efficacious. Prompt means should also be used, to keep up a perspiration. An *Emetic* may also be administered, and repeated as the mucus accumulates in the lungs. This treatment will restore a general warmth and excitement to the surface and extremities, by recalling the blood from the internal to the external parts. If the symptoms continue violent, a *Mustard Plaster* may be applied upon the chest, as well as the breast or side; and mild *Cathartics* occasionally administered. If there is great pain, restlessness, and distress, ten grains of *Diaphoretic Powders* may be given every two hours, till relief is afforded. But they are best given at night, to allay irritation, promote perspiration, &c. It will be of the most essential service to support the strength of the patient, which has a constant tendency to sink. For this purpose two or three pills of *Capsicum* may be given three or four times a day; also *Wine Sangaree* or *Sling*, *Porter*, &c. There is often a great tendency to putrescency in this disease, which must be counteracted by giving freely of *yeast*.

There are two opposite conditions of the body to contend with in this disease,—local inflammation on the one hand, and typhoid symptoms on the other. Nothing will be of more importance in the treatment of this complaint than the administration of *diaphoretic remedies*. By these, we counteract a vitiated state of the fluids, at the same time diminish, if not totally remove the local irritation of the lungs, or other organs involved in the disease. An infusion of *Snake-root* may be given through the day; also *Boneset* and *Hoarhound*.

A physician states, that the following formula has proved efficacious as a mild diaphoretic in this disease:—

Take Salt of Hartshorn (*Carbonas Ammoniac*),
Camphor (*Gum Camphora*),

Equal parts. Divide into doses of eight grains each. Give one every two, three, or four hours, according to symptoms. If there is great pain, restlessness, or delirium, combine ten drops of laudanum with each powder, until quietude is procured.

In one case of this disease, the above prescription had a very salutary effect, and the patient soon recovered.

It should be borne in mind, that the loss of even a few ounces of blood in this disease, is attended with fatal consequences.* If the pulse continues too frequent, give fifteen drops of the *Tincture of Digitalis* three times a day. The feet should be daily bathed in tepid ley water,

Dr. Drake of Peekskill, N. Y. informs me that this disease was very prevalent in that section of the country, a few years since, and proved very mortal. Bleeding was found exceedingly injurious. He states that a Dr. White bled twelve persons labouring under this complaint, and eleven of them died.

and *Mustard Sinapisms* applied. If this disease, in its incipient or acute stage, was judiciously treated, in all probability, it would seldom or never run into the typhoid state. It is the mal-practice of physicians which cause the true pneumonia to degenerate into the real typhoid state.

CHAPTER XV.

CONSUMPTION, (*Phthisis Pulmonalis*.)

DESCRIPTION.

PULMONARY Consumption (*Phthisis Pulmonalis*.) is characterized by emaciation, debility, cough, hectic fever, and purulent expectoration. Some authors enumerate thirty different species of this complaint, but this distinction seems unnecessary for practical purposes.

CAUSES.

The causes which produce this afflicting and extensive malady, are very numerous. The following are the most general :

Hereditary disposition, particular formation of the body, obvious by a long neck, prominent shoulders, and narrow chest ; scrofulous diathesis, or state of the system indicated by a fine clear skin, fair hair, delicate rosy complexion, large veins, thick upper lip, a weak voice, and great sensibility ; certain diseases, such as syphilis, scrofula, the small pox, and measles ; particular employments, exposing artificers to dust, such as needle pointers, stone cutters, millers, &c. or to the fumes of metals or minerals under a confined and unwholesome air ; violent passions, exertions, or affections of the mind, as grief, disappointment, anxiety or close application to study, without using proper exercise ; frequent and excessive debaucheries, late watching, and drinking freely of strong liquors ; great evacuations, as diarrhoea, diabetes, excessive venery, fluor albus, immoderate discharge of the menstrual flux, and the continuing to suckle too long under a debilitated state ; and, lastly, the application of cold, either by too sudden a change of apparel, keeping on wet clothes, lying in damp beds, or exposing the body too suddenly to cool air, when heated by exercise ; in short, by any thing that gives a considerable check to the perspiration. The more immediate or occasional causes of phthisis are, hæmoptysis, or bleeding of the lungs, pneumonic inflammation proceeding to suppuration, catarrh, asthma, and tubercles, the last of which is by far the most general.

In the fifth volume of *Memoirs of the Medical Society*, we are informed by Dr. Johnson, that persons employed in the pointing of needles, by dry grinding them, are quickly affected by pulmonary complaints, such as cough, and purulent and bloody expectoration ; and that they scarcely ever attain the age of 40 years.

We are also told by Dr. Willan, in his reports, that hair dressers, bakers, masons, bricklayers, labourers, laboratory men, coal heavers, and

chimney sweepers, are very liable to obstinate pulmonic diseases; as are likewise in an equal degree, the dressers of flax and feathers, and workmen in the warehouses of leather sellers. Many persons thus engaged struggle with a hard tormenting cough until it terminates in consumption; whereas, by a timely removal into pure air, and having recourse to a suitable regimen, they might soon have been restored to health.

Dr. E. Smith, of Boston, has the following remarks on the causes and prevalence of this disease:

There is no disease (says he) more alarming to people in our country than that which is emphatically called "*the Consumption*." It is considered more common than in former years, and this doubtless is true. There are at least four reasons for this.

1. The people are more numerous than they were fifty years ago, about four to one, and allowing people died in the same proportion, this would make four to one. It is however certain that consumptive cases have increased beyond the increase of the people.

2. A second cause of *consumption* is the great difference in the manner of *living* and *dress*, as it respects people now, and fifty years ago; particularly in females.

Half a century ago, people lived on common, simple, healthy food and drink, and were healthy. We sometimes find an old person who tells us of living upon bean porridge, and other food equally simple. In those days the dress of men and women was plain, and suited to the climate where they lived, and to the different seasons of the year. At this time how different! The fashions of the nobility in warm climates are brought to this country, and females of all classes endeavour to imitate them, until a consumption follows, and death ends the short race of them.

In addition to a thin dress, their clothes are tight, the natural shape is crowded upon, and it is sometimes hard for them to stoop or breathe easy. A violent cold is taken, a bad cough follows, symptoms of consumption are feared and mentioned, and at last it is seated, and the poor fashionable daughter or wife is taken away by what is called the *quick consumption*.

3. A third cause of consumption is the great change in the climate within twenty years. Within that time, we have cold summers, which were against the health of young people. At first young people, and others far advanced in years, were taken off with the spotted fever. They did not hold heat enough to withstand the cold of winter; their blood chilled, and they died by thousands. Many who lived through, and are now grown up, are troubled with cold hands and feet, foul stomachs, cholic, head-ache, jaundice, pain in the limbs, indigestion, or consumptive symptoms. I do not think there ever was a time when so many young people were troubled with these complaints as at the present.

4. A fourth cause of *consumption*, is the manner in which people are employed, and the manner of treating them when sick.

The employment of thousands, particularly young people, is now different from what it was forty years ago. Multitudes work in factories, and are employed where there is but little exercise, they are obliged to continue long in a stooping posture. Others are employed in braiding

straw, or working over the steam of brimstone. In the straw business there are two things injurious to females, one is sitting so much, the other and most pernicious, is continually putting their fingers in cold water. This in many, cools the blood through the whole system, and they either become partially blind, dropsical, or consumptive.

The manner of treating people supposed consumptive, is in my opinion the cause of more deaths by consumption than any thing else. People will send for the doctor when they have a bad cough, pain in the side, foul stomach, or no appetite. They are directed to put on a *blister*; have an issue or *seaton*, be *bled*, take *salts*, *calomel* and *jalap*, take a tartar emetic puke, diet themselves or go through a course of *salivation*, or take mercury till their tongues are swelled out of their mouths, their lips are black, their teeth loose, and they almost dead with hunger. If all this does not cure, the last direction is to go into the country for your health. I do not believe there is a well man on earth who could go through all this treatment without being confined to his bed. After going through this process the person is commonly declared in a consumption, past all cure, and thus they die.

I believe "*the consumption*" may as certainly be cured as any other complaint, if rightly attended to in season.

SYMPTOMS.

The incipient symptoms usually vary with the cause of the disease; but when it arises from tubercles, it is usually thus marked: it begins with a short dry cough, that at length becomes habitual, but from which, nothing is spit up for some time, except a frothy mucus. The breathing is at the same time somewhat impeded, and upon the least bodily motion is much hurried: a sense of straitness, with oppression at the chest, is experienced: the body becomes gradually leaner, and great languor with indolence, dejection of spirits, and loss of appetite, prevail. In this state the patient frequently continues a considerable length of time, during which he is, however, more readily affected than usual by slight colds, and upon one or other of these occasions the cough becomes more troublesome and severe, particularly by night, and it is at length attended with an expectoration, which towards morning is more free and copious. By degree the matter which is expectorated becomes more viscid and opaque, and now assumes a greenish colour and purulent appearance, being on many occasions streaked with blood. In some cases, a more severe degree of hæmoptysis or bleeding at the lungs attends, and the patient spits up a considerable quantity of florid, frothy blood. The breathing at length becomes more difficult, and the emaciation and weakness increasing. With these, the person begins to be sensible of pain in some part of the thorax, which, however, is usually felt at first under the sternum, particularly on coughing. At a more advanced period of the disease, a pain is sometimes felt on one side, and at times prevails in so high a degree, as to prevent the person from lying easily on that side; but it more frequently happens, that it is felt only on making a full inspiration, or coughing. Even where no pain is felt, it often happens that those who labour under consumption cannot lie easily on one or other of their sides, without a fit of coughing being excited, or the difficulty of breathing being much increased,

At the first commencement of the disease, the pulse is often natural, or perhaps is soft, small, and a little quicker than usual; but when the symptoms which have been enumerated have subsisted for any length of time, it then becomes full, hard, and frequent. At the same time the face flushes, particularly after eating; the palms of the hand, and soles of the feet, are affected with burning heat; the respiration is difficult and laborious; evening exacerbations become obvious, and, by degrees, the fever assumes the hectic form. This species of fever is evidently of the remittent kind, and has exacerbations twice every day. The first occurs usually about noon, and a slight remission ensues about five in the afternoon. This last is, however, soon succeeded by another exacerbation, which increases gradually until after midnight; but, about two o'clock in the morning, a remission takes place, and this becomes more apparent as the morning advances. During the exacerbations the patient is very sensible to any coolness of the air, and often complains of a sense of cold when his skin is, at the same time, preternaturally warm. Of these exacerbations, that of the evening is by far the most considerable. From the first appearance of the hectic symptoms, the urine is high coloured, and deposits a copious branny red sediment. The appetite, however, is not greatly impaired, the tongue appears clean, the mouth is usually moist, and the thirst is inconsiderable. As the disease advances, the mouth and fauces put on rather an inflamed appearance, and are beset with aphthæ, or canker, and the red vessels of the tunica adnata become of a pearly white. During the exacerbations, a florid circumscribed redness appears on each cheek; but at other times the face is pale, and the countenance somewhat dejected. At the commencement of hectic fever, the belly is usually costive; but in the more advanced stages of it a diarrhœa often comes on, and this continues to recur frequently during the remainder of the disease; colliquative sweats likewise break out, and these alternate with each other, and induce vast debility. In the last stage of the disease the emaciation is so great, that the patient has the appearance of a walking skeleton; his countenance is altered, his cheeks are prominent, his eyes look hollow and languid, his hair falls off, his nails are of a livid colour, and much incurvated, and his feet are affected with œdematous, or dropsical swellings. To the end of the disease the senses remain entire, and the mind is confident and full of hope. It is, indeed a peculiar symptom attendant on phthisis, that those who labour under it are seldom apprehensive or aware of danger; and it is no uncommon occurrence to meet with persons labouring under its most advanced stage, flattering themselves with a speedy recovery, and forming distant projects under that vain hope. Some days before death the extremities become cold. In some cases a delirium precedes that event, and continues until life is extinguished.

PROGNOSIS:

Pulmonary consumption is in every case to be considered as attended with much danger; but it is more so when it proceeds from tubercles, than when it arises in consequence either of hæmoptysis, or pneumonic suppuration. In the last instance, the risk will be greater where the abscess breaks inwardly, and gives rise to empyema, than when its con-

tents are discharged by the mouth. Even cases of this nature have, however, been known to terminate in immediate death. The impending danger is generally to be judged of, however, by the hectic symptoms; but more particularly by the factor of the expectoration, the degree of emaciation and debility, the colliquative sweats, and the diarrhoea. The disease has, in many cases, been found to be considerably retarded in its progress by pregnancy; and in a few has been alleviated by an attack of mania, or mental derangement.

DISSECTION.

The morbid appearance most frequently to be met with, on the dissection of those who die of phthisis, is the existence of tubercles in the cellular substance of the lungs. These are small tumours which have the appearance of indurated glands, are of different sizes, and are often found in clusters. Their firmness is usually in proportion to their size, and when laid open in this state they are of a white colour, and of a consistence nearly approaching to cartilage. Although indolent at first, they at length become inflamed, and lastly from little abscesses or vomicae, which breaking, and pouring their contents into the bronchia, give rise to a purulent expectoration, and thus lay the foundation of phthisis. Such tubercles or vomicae, are most usually situated at the upper and back part of the lungs; but in some instances they occupy the outer part, and then adhesion to the pleura are often formed.

When the disease is partially, only about a fourth of the upper and posterior part of the lungs is usually found diseased; but, in some cases, life has been protracted till not one-twentieth part of them appeared, on dissection, fit for performing their function. A singular observation, confirmed by the morbid collections of anatomists, is, that the left lobe is much oftener affected than the right.

DIAGNOSIS.

As an expectoration of mucus from the lungs may possibly be mistaken for purulent matter, and may thereby give us reason to suspect that the patient labours under a confirmed phthisis, it may not be amiss to point out a sure criterion, by which we shall always be able to distinguish the one from the other. The medical world are indebted to the late Mr. Charles Darwin for the discovery, who has directed the experiment to be made in the following manner:

Let the expectorated matter be dissolved in vitriolic acid, and in caustic lixivium, and add pure water to both solutions. If there is a fair precipitation in each, it is a certain sign of the presence of pus; but if there is not a precipitate in either, it is certainly mucus. This, however, is not always a sure criterion.

COMMON PRACTICE.

Bleeding, blistering, mercury, antimony, squills, and laudanum. Issues, seaton, &c.

REFORMED PRACTICE.

Indications of cure.—The indications are,

1. To moderate inflammatory action.

2. To support the strength, and promote the healing of ulcers in the lungs.

3. To palliate urgent symptoms.

It undoubtedly is the case, that thousands die of this disease in consequence of the mal-practice of physicians. It has become proverbial, that as soon as patients are placed under their charge, they begin rapidly to decline. Indeed, this cannot otherwise be, as the medicine they give produces the most debilitating effects, and undermines the constitution much faster than the disease itself. From the structure of the lungs it is unquestionably a difficult disease to cure; the constant motion of them, prevents the healing or restorative process; notwithstanding which, pulmonary consumption may be cured as well as other diseases, by judicious or skilful treatment, especially in the first stages of the disease.

Almost numberless medicines are recommended in this complaint, few of which have much claim upon our attention. The following treatment we have found very generally successful, especially in the incipient stages of the disease, and when it has failed to cure, has uniformly mitigated the complaint and rendered the patient more comfortable, and thus prolonged his life, which is one great object of medicine.

Vegetable Emetics.—There is no class of medicines so highly beneficial in this disease as certain kinds of emetics. Mineral agents, such as antimony and vitriol, are dangerous to administer, but vegetable, operate very different. In consequence of their action upon the thoracic viscera by sympathy, they are very valuable in consumption, acting with peculiar force and effect upon the lungs, removing the tough, viscid mucus from the air cells, and by producing absorption, by their tonic and corroborant effects, bring about a healthy state of these organs. No preparation will be found to answer a better purpose than the following:

Take Emetic Plant, (*Lobelia Inflata*,) 1 part.

Blood root, (*Sanguinaria Canadensis*,) 1 part.

Pulverized.

From half a tea-spoonful to a tea-spoonful of this powder may be given in tea of any kind, every other morning fasting, if the strength of the patient will permit; if there be great debility, it should be administered only once or twice a week. It may be given in an infusion of *Eupatorium* or *Boneset* tea, and should not this be sufficient to produce nausea and slight vomiting, a small additional quantity may be taken at each dose. This produces very considerable sickness, which is an objection with many to its use; but it must be remembered that its salutary effects depend in a great degree upon this very nauseating effect. Without exception *Lobelia* is the most diffusible, penetrating, and permanent stimulus with which we are acquainted. Its action upon the great sympathetic nerve is so immediate, that it is felt in every part of the system.

This preparation seems to exert a specific effect upon the stomach, lungs, and all the surrounding viscera.

Emetics should be repeated according to the strength of the patient, and continuance of the symptoms. No fear need be apprehended from the shortness of breath and apparent debility that follows these emetics.

Some patients can better take the following liquid form of the medicine :

Take Tincture of *Lobelia Inflata*, one part.

Blood root, (*Sanguinaria Canadensis*,) one part. Mix.

Two tea-spoonfuls is a dose, to be taken in any kind of tea.

Sudorifics and Diaphoretics.—In the commencement of consumption it is necessary to promote perspiration. For this purpose, give an infusion of the *Seneca Snake root*, (*Polygala Seneca*.) If this should not be sufficient to produce perspiration, give a tea-spoonful of the *sweating*, or *Sudorific Drops*. This determination to the skin must be kept up during the continuance of the disease ; but it must be very moderate, merely a moisture of the surface.

Pectorals and Expectorants.—Whenever the lungs become loaded with purulent matter, or mucus, give the following medicine :

Take Pleurisy Root, (*Asclepias Tuberosa*,) 1 oz.

Blood root, (*Sanguinaria Canadensis*,) 1 oz.

Emetic Plant, (*Lobelia Inflata*,) $\frac{1}{2}$ oz.

Bruise all. Add Malaga or Port wine, 1 pint.

Give one or two tea-spoonfuls every time there is an accumulation in the lungs.

Tonics, corroborants, &c.—Give the following syrup :

Take Spikenard root, (*Azalia Racemosa*) the root,

Hoarhound, (*Marrubium Vulgare*,) the plant,

Elecampane root, (*Inula Helcniun*.)

Comfrey root, (*Symphytum Officium*,)

Of each two ounces.

Boil all in rain water till the strength is extracted, then evaporate to two quarts, strain and add two pounds of sugar and two pounds of honey. Boil again to two quarts, add one gill of spirits. Give a wine glass morning, noon, evening, and bed time. This must be continued daily.

This syrup will be found to possess extraordinary virtues in pulmonary consumption. It lessens the cough, removes the pain of the breast, and gives strength and energy to the system generally, and has cured many persons who have had every symptom of genuine consumption. Should this fail of removing the complaint, let the following syrup be given :

Take Liverwort, (*Hepatica Triloba*,) 1 oz.

Solomon's Seal, (*Convalaria Polygonatum*,) 2 oz.

Skunk Cabbage, (*Symplocarpus Fetida*,) 2 oz.

Blood root, (*Sanguin. Canad.*) half oz.

Bugle Weed, or Water Hoarhound, 2 oz.

Add a suitable quantity of rain or soft water and extract the strength by boiling. Let it be reduced to two quarts, then add two lbs. of sugar. Dose, a wine glass three times a day, fasting. This will be found very serviceable, particularly when there is bleeding at the lungs.

An infusion or tea made of the *White Pine Bark* may be given with the above syrup.

Anodynes.—If the cough be very troublesome, and the rest of the pa-

tient is very much disturbed in consequence of the following mixture : the patient may take

Take Balsam of Tolu, (*Balsamum Tolutanum*,) half oz.

Balsam of Fir, (*Abies Balsamifera*,) half oz.

Best Opium, half a drachm.

Digest in half a pint of alcohol for a few days. Give one tea-spoonful of the above mixture in any convenient vehicle.

For the hectic fever, give a tea or infusion of the *Amaranthus*. This diminishes arterial excitement without increasing the heat of the system. It is also serviceable in night sweats. Should it not answer this purpose, 15 or 20 drops of Elixir of Vitriol, may be taken at bed time in a wine glass of water.

Should the pulse continue too frequent and full, let 15 drops of the *Tincture of Digitalis* be taken in any kind of tea three times a day until the inflammatory symptoms subside.

Diluent and Tonic drinks.—An infusion of *Hoarhound* and *Boneset* combined, and sweetened with honey may be drank through the day, and especially while taking the syrups.

Inhalation.—Among the various means employed in the cure of consumption, inhalations are very conspicuous. A Dr. Middleton, of Philadelphia, invented a machine to communicate certain powders directly to the lungs—such as gum myrrh, cicuta, &c. As soon as I heard of this invention, I procured his machine and tried it in several cases, and I found no difficulty in conveying the powders into the cellular substance of the lungs, but it did not prove a remedy. Benefit was derived, the expectoration was changed in quantity and quality, and the *principle* of it has ever appeared excellent, but the failure apparently has consisted in the want of administering proper medicinal articles or agents. Was this machine to be used in conjunction with the treatment mentioned above, would it not prove a certain remedy for this Hydra, which annually sweeps its tens of thousands from the earth. I have thought of instituting further experiments in this disease, and conveying to the lungs powders of certain medicinal plants, or agents, of the most healing and sanative properties.

It is well known to every physician that no remedies can be communicated directly to the lungs in any other manner than by inhalation through the trachea and bronchial vessels directly to them. All the benefit of other medicine must be derived by sympathy.

The following inhalation has been much praised :

Take Extract of Cicuta, half a drachm.

Digest for several days in an ounce of sulphuric ether.

Of this, one, two, or three tea-spoonfuls are put into a wine glass held up to the mouth, and inspired till the whole is consumed.

The bowels must be regulated by mild laxatives.

Let a strengthening plaster be applied on the breast and between the shoulders. They are useful from their counter-irritating and diaphoretic effects.

Oysters, beef steaks, and in short whatever sits easy, or agrees with the stomach may be used.

A change of Climate, or air.—This has sometimes performed wonders. Persons have gone from a Northern to a Southern climate, where bilious diseases prevail, and have been perfectly cured when they have been even in the last stages of the consumption. East Florida, New Orleans, and the West Indies, the South of France and Italy possess such peculiar temperature as to suspend or cure the disease; the soothing effect of the air has the power of healing the lungs in a most remarkable manner, and I have the fullest evidence of the benefit arising from this change of climate.

One man, nearly gone with the disease, was recommended to go to a place where he would be likely to take the Bilious Fever. He did so, and became much reduced with it, and the consequence was that he was soon cured of the consumption.

A patient of mine, who had been near her end with this disease, embarked on board of a ship bound to Brazil, took up her residence there, and in a few weeks after her arrival, (she afterwards informed me,) was free of her cough, and apparently well. It appears that heat or bile is an antidote to pulmonary diseases, from its opposite properties or effects.

I have sometimes thought that the vicissitudes of our northern climate produced or generated an acid of a very irritating nature, which is accompanied by a check of perspiration, and which is counteracted or neutralized by this influence of a southern climate acting specifically upon the liver, causing it to pour out an unusual quantity of bile, which by its sympathetic action upon the lungs, removes the disease in some measure; for we are aware that one organ cannot be sensibly diseased, without the other participates with it; or the benefit may be entirely owing to the genial warmth, heat, and uniform temperature of the climate.

Many have been cured by remaining a long time at sea, and constantly breathing a pure air. Would not a three years voyage to the South Seas or Pacific Ocean, remove this complaint?

The following remarks from an English author on this disease, are worth perusing:

Pulmonary consumption is a disease almost peculiar to a certain zone of northern latitude. A little farther to the north, or to the south, the ravages of these complaints are comparatively trifling. The only natural cause to which this can with propriety be attributed, is the fluctuation of our atmospheric temperature between the confines of heat and cold. The increased frequency of pulmonic complaints, which has accompanied the mere general diffusion of wealth, and consequent habits of luxurious living in this country, affords, I think, sufficient proof that tender and indulgent treatment is not the best means of obviating them. What are the classes of mankind most susceptible of, and most injured by the impressions of heat and cold? Precisely those who are least exposed to their influence. Sedentary artificers, who necessarily pass their days in close and heated chambers, are swept off in unaccountable numbers by pulmonary consumption; while sailors, ploughmen, butchers, and all persons whose occupations leads them to be much in the open air, enjoy a comparative immunity from the attack of this disease. Among the native inhabitants of America, Doctor Rush informs us, that pulmonary consumption is unknown; but in pro-

portion as they adopt the arts and manners of civilized life, do they become liable to the fatal influence of this complaint.

When a wealthy parent sees a delicate child shiver at the freshness of the breeze, a natural tenderness leads him to avert this unpleasant feeling by the means he can most readily command, close apartments and warm clothing. But he thus augments that very delicacy of constitution he should endeavour to counteract. The variations of atmospheric temperature are most sensibly felt by those who are cased in the thickest clothing; as plants reared in the hot-house are least able to bear the blasts of winter. Contrast the leaden-coloured visage, and the chilblain toes and fingers of the puny schoolboy, shivering and crawling along the street in a winter's day, with the appearance of the country lad of equal years employed all day in following the plough, the surface of his body, in place of being chilled by the cold, is roused to a state of increased vascular action, his countenance glows with the genuine hue of health, and his whole frame bespeaks elasticity and vigour. Surely from this example we might be taught the most effectual method of averting delicacy of constitution, being careful to modify the means according to the object we have to operate upon. Let the child whose wealth can command, and whose future existence is of sufficient importance to justify such attention, reside in a part of the country where the soil is chalk or limestone, and the air pure. Let him be abroad all day, and during every kind of weather, provided he is employed in active exercise; let him be guarded against suddenly approaching, or sitting much over the fire, even in winter. Let the habit of retiring early to bed, and leaving it early in the morning, be strictly enforced. Let him wear no more clothes than are requisite to guard against cold, and plunge into the sea, or a river, for a moment, daily, during the three warmest months of summer. The phthisical habit is, in general, attended by a precocity of intellect, which it is of more importance to check than to encourage. In such instances the improvement of the mind should be considered as a secondary object, and may well be postponed till a certain share of robustness of constitution has been ensured. This kind of corporeal education is obviously incompatible with the usual discipline of schools, whether private or public, and can only be advisable where the importance of the object justifies the various sacrifices that must be made in order to attain it.

I very recently had occasion to see the success of this plan completely exemplified. Every possible attention was paid to the health of a delicate child by its anxious parents. He lived in spacious apartments in an open and airy part of London; was carried abroad several times every day when it did not rain; and the diet was regulated with every attention to propriety. Notwithstanding all this care the flesh of this child was flabby, he was averse to exercise, the belly became prominent, and the glands on each side of the neck were very considerably enlarged. In this state the child was removed the beginning of last summer to a dry and healthy situation in the neighbourhood of the sea. There it ran about and bathed along with other children of a similar age. No particular attention was paid to dress or diet. In the course of a few months the tumid abdomen subsided, the swellings of the neck disappeared, the flesh became firm, and this child, whose life had been

despaired of, and was sent from home as on a forlorn hope, returned vigorous, active, and healthy.

But precautions against this insidious disease are rarely had recourse to at so early a period of life. The buoyant spirits and active propensities of its destined victims rarely excite suspicion either in themselves or their friends of the approaching mischief. As the age of puberty approaches, other indications of the propensity to phthisis are developed. The narrow and elongated form of the chest becomes more apparent, and is chiefly indicated by the prominence of the shoulders, which stand out from it on each side somewhat like wings. A broad deep chest, the transverse section of which approaches the circle, affords the best criterion of a healthy and vigorous conformation of the body, not only in man but in all kinds of quadrupeds, which are subservient to his wants. For the support of life it is necessary that nearly one half of the blood should circulate through the lungs in the same time that the remainder passes through the rest of the body. But if the lungs are prevented from expanding to their proper magnitude in consequence of being confined within the limits of a narrow thorax, their proper blood-vessels must be proportionally diminished in number as well as in dimensions, and on any sudden push of blood, their coats, already over-distended, must be prone to rupture. At this period of life, too, there is evidently an effort of the constitution endeavouring to expand every part to a state of full perfection. This is evinced by frequent discharges of blood from the nose. The vessels of that part readily heal, but an accident of the same kind taking place in the lungs, not unfrequently lays the foundation of consumption.

This temporary fulness of blood should be counteracted, by strictly adhering to a diet of the farinacea and ripe fruits. Animal food and fomented liquors ought to be rigidly prohibited. Even milk often proves too nutritious. Exercise should be regular but gentle. Sudden and violent exertions are extremely hazardous. Riding on horseback is preferable to any other kind of exercise. Such efforts of the voice as are required in singing or playing on any wind-instrument of music, frequently produce discharges of blood from the lungs; but the practice of reading or reciting for some time together in a moderate tone of voice, tends to strengthen these organs, and to diminish the danger of pulmonary hemorrhage from any sudden exertion.

During the circulation of the blood through the lungs, a principle necessary to the support of life is absorbed from the air; and various matters, the longer continuance of which in the body would be noxious, are also discharged in the form of vapour or gas. That there is, besides, no inconsiderable quantity of aqueous fluid secreted and discharged from the lungs, every person must be convinced, who has attended to the deposition of watery particles that takes place from the breath in a frosty day. Of the whole quantity of perspirable matter discharged from the surface of the body in any given portion of time, that exhaled from the surface of the lungs may be estimated as amounting to the one-third. The skin and the lungs being both secreting surfaces, must also be considered as organs mutually compensating or balancing each other. If the skin be suddenly chilled, a larger share of perspirable matter will endeavour to escape by the lungs, as being an

internal, and therefore a warmer surface. It is not surprising that this effort should in a delicate organ be productive of derangement and disease, and accordingly we daily hear people dating their first attack of pulmonary complaints from *sitting in a cool place after having been over-heated; from being thoroughly soaked with rain, or from cold-bathing in an improper state of the system.*

The purpose of these observations is to enforce the propriety of maintaining cutaneous perspirations, and endeavouring to render the surface of the body less susceptible of atmospheric variations. In persons of a phthysical habit the skin is in general either dry and scabrous, or clammy, both of which conditions betoken deficient perspiration. The most effectual means of removing this morbid state of the body is the sedulous use of cutaneous friction, with warm rain water and ley applied daily. Why a practice, on which the ancient physicians placed so much dependence not only for the cure of many diseases, but in a pre-eminent manner for the preservation of health, should have in modern times fallen so completely into neglect, it is not perhaps easy to account; although at present nothing seems to be considered as medicine except what is taken into the stomach; as if the due regulation of air and exercise did not furnish means of recovery, at least as efficacious as drugs.

From regularly persevering for some length of time in this practice I have observed a very obvious alteration produced in the texture of the skin. It appears to acquire thickness, and to become mellow and pliable, a condition very different from that of persons disposed to consumption, whose skin is commonly thin and harsh. The muscles also seem to derive firmness from this practice. It will also be found daily to remove no small quantity of furfuraceous matter, which, whether inspissated perspiration adhering to the surface, or particles of decaying cuticle, is certainly better away. This practice also removes every kind of roughness and asperity from the surface of the skin, which becomes beautifully smooth and polished, so that even as a cosmetic, having no tendency to impair health, bathing may be advantageously employed. After exposure to wet to strip and bathe the feet and surface of the body till it glows, is unquestionably the best means to prevent taking cold.

I do not presume so strenuously to recommend friction of the skin as a means of supporting the healthy action of the external surface of the body, and of promoting cutaneous perspiration, without having witnessed remarkable change for the better produced in the constitution by adopting and persevering in this practice. Indeed I am disposed to attribute much of the benefit derived from exercise on horseback, as well as the good effects of sea voyage towards a mild climate, to the increase of perspiration produced by these modes of gestation.

Every person suspicious of predisposition to pulmonary consumption ought at all times, but especially in cold weather, to wear a quantity of woollen clothing sufficient to obviate any approach to the perception of chilliness; independently however of the actual presence of obstinate hoarseness or cough, I am disposed to think that the requisite quantity of flannel is more advantageously worn over the usual shirt, than in immediate contact with the skin.

The possibility of communicating the disease by contagion is a point that has been much agitated. As a measure of precaution, the delicate ought to decide this question for themselves in the affirmative. Exhalation from the lungs is the mode by which infectious diseases are most generally propagated; and from analogy we might infer that air impregnated with the effluvia of these organs in a state of ulceration, would have a tendency to excite diseased action of a similar kind if received into the lungs of a person previously disposed to this complaint. I have seen more than one instance of a husband who appeared to have no previous disposition to consumption, being affected with a distressing cough, which continued to harass him for months while his wife was lingering under that disease. On one melancholy occasion I witnessed the successive deaths of three young ladies, two of whom, in my opinion, decidedly caught the disease in consequence of their sedulous attention, during the progress of the indisposition, to her who was first affected, who evidently was of a phthisical habit, which was not apparent in either of the others.

If the presence of the symptoms which have been already described as characterising this disease renders its existence no longer equivocal, the person so affected ought without delay to migrate towards a warmer climate. Should circumstances render this expedient impracticable, the next best plan a phthisical person can adopt is to remove into a low and rather damp situation where bilious diseases prevail. The fatal event of pulmonary consumption is uniformly accelerated by residing in an elevated region. There are even instances on record of phthisis making its appearance in families, previously unaffected by it, on changing their places of residence from a level to a hilly country. While on the contrary the inhabitants of extensive districts in low places enjoy a complete immunity from this disease. In Holland, pulmonary consumption is a disease of comparatively rare occurrence. The same situations that predispose to ague are unfavourable to the attack of phthisis, as if these two states of consumption were incompatible with each other. *The physicians of ancient Rome were accustomed to send their consumptive patients to the low and marshy land of Egypt.* Cicero, the celebrated orator, who, in his youth, was threatened with consumption, as the hollow temples and sharp features of his remaining busts abundantly testify, travelled into Egypt for the recovery of his health. In this country the choice of situation is not sufficiently attended to.

In the incipient stages of phthisis pulmonalis a vomit taken in a morning, fasting, I have known occasionally to be of use. Keeping up a copious discharge from the surface of the chest by the savin ointment subsequent to the applications of a strengthening-plaster, sometimes appears to arrest the progress of the disease.—[*Buchan.*]

I shall conclude this chapter by relating the following circumstance which I recollect reading many years since and which may prove interesting and useful."

A lady retired to the country to die, being in the last stage of consumption. One morning while sitting at her chamber window she observed a dog almost wasted to a skeleton, enter the garden very early, into a bed of *Chamomile* and licked the dew from the flower of the

plant. After a number of days, she noticed an improvement in the appearance of the consumptive animal. This induced her, as the last alternative, to imitate his example, and every morning in the same manner to sip the dew from the same bed. The effect of which was an abatement of all her symptoms, followed by a perfect cure of her complaint.

This story may at least inspire confidence enough to induce us to drink freely of this excellent plant, if not literally to imitate the consumptive dog and lady.

Dr. Hopkins, one of the graduates of our school informs me, that during his residence in South or North Carolina, a lady was nearly reduced to a skeleton by the consumption. She was abandoned by the physician as incurable and found no remedy from any source whatever.

In this situation, some person advised her to take the following preparation :

Take Polypody.

Liverwort, (*Hepatica Triloba.*)

A decoction to be taken freely through the day.

She took this medicine, and immediately began to grow better, and after continuing it some time, it effected a radical cure, and she is now well.

Never having used this combination, I am unable to speak of its effects in this complaint. Nor can I say positively that we are acquainted with the *Polypody* which she used, and I therefore cannot give the botanical or scientific name of it ; but I am well persuaded that the plant alluded to, is the *Polypodium Vulgare*, called by some fern root, rock brake, brake root, female fern. I hope, however, before this work is closed, to obtain correct information respecting this article, as the physician alluded to, has promised to write to the lady who was cured, and if so, such information will be found under the head of Polypodium. (Contained in the *Materia Medica* connected with this work.)

Since writing the above, a physician informs me that a person in the state of Connecticut was cured of a deep seated cough, attended with hæmoptysis, or bleeding at the lungs, by taking a syrup of the *Polypody* and *Black Cohush*.

The following receipt has been sent to me by Dr. T. Seely for insertion in this work. He states that he has been remarkably successful in treating consumption by the use of it.

Take Water, 6 oz.

Olive Oil, 2 oz.

Paregoric, 2 drachms,

Spirits of Ammonia (Hartshorn,) 1 drachm.

Sugar, 2 oz.

Mix.

Take a table-spoonful every two hours.

This medicine, says Dr. Seely, after proper evacuations and the fluids corrected, will generally produce a vomica or abscess on the lungs, which will discharge the most fetid matter that can be conceived ; at

which time a gargle of *yeast* and *water* must be used to cleanse the mouth and throat.

The following recipe is taken from a small Medical Treatise entitled "Dr. John Williams's Last Legacy to the World," and which may be taken with safety and advantage.

Take a table-spoonful of common Tar,
3 spoonfuls of Honey,
3 Yolks of Hens' Eggs,
Half a pint of Wine.

Mix together in a dish with a knife or spoon, then bottle for use.

Dose, a tea-spoonful morning, noon, and night before eating. Drink barley tea for constant use.

Since the above I have received a communication from Dr. Lobstein, on the properties and uses of a plant called the *Water Fennel*, or fine leaved *Water Hemlock*, in consumption, an account of which may be seen, by reference to this article under the head of *Materia Medica*.

CHAPTER XVI.

PLEURISY, (*Pleuritis*.)

DESCRIPTION.

PLEURISY is an inflammation of the pleura, which lines the internal coat of the thorax, and covers its viscera. When it is seated in this membrane, which lines the inside of the breast, it is called a true or internal pleurisy; but when it chiefly occupies the external parts, and principally affects the muscles within the ribs, it is called the spurious or bastard pleurisy. The pleurisy is most predominant in the spring season, and prevails among labouring people, especially such as are much exposed, and are of a sanguine constitution.

CAUSES.

Its causes are cold applied to the skin; sudden and great distention of the pleura in drawing breath; drinking cold liquors after being heated by violent exercise; cold, northerly winds; sleeping without doors, on the damp ground; wet clothes; plunging the body into cold water, or exposing it to the cold air, in a state of perspiration. Generally speaking, whatever obstructs perspiration may occasion the pleurisy. It may also be produced by drinking strong liquors; stopping issues, ulcers, sweating of the feet or hands, or other usual evacuations; the sudden striking in of the small-pox, measles, or any eruption. It may also be brought on by violent exercise, as running, leaping, wrestling, lifting heavy burthens, blows on the breast, &c.

SYMPTOMS.

This, like most other forms of fever, begins with chilliness and shivering, which are followed by heat, thirst, and inquietude, and the other common symptoms of fever. After a few hours the patient is seized with a violent pricking pain in one of his sides, commonly about the

short ribs, which sometimes extends itself towards the back bone, sometimes towards the shoulder bone, and towards the fore part of the breast, and this is attended with frequent coughing.

The matter which the patient spits up is at first small in quantity, and thin, and mixed with particles of blood; but as the disease advances, it is more plentiful and more concocted, but not without a mixture of blood. The pulse is remarkably strong, and seems to vibrate like the tense string of a musical instrument, and the blood drawn from a vein, as soon as it is cold, looks like melted suet. Sometimes there is little or no spitting in this disease, and hence pleurisies are distinguished into moist and dry.

PROGNOSIS.

An idea of the termination of the disease may be drawn from the severity of the symptoms. If the fever and inflammation have run high, and the pain should cease suddenly, with change of countenance and a sinking of the pulse, great danger may be apprehended; but if the heat and other febrile symptoms abate gradually, respiration is performed with greater ease and less pain, and a free and copious expectoration ensues, we may predict a favourable result. Empyema, or a collection of pus in the cavity of the thorax, is occasionally one of the terminations of pleuritis.

DISSECTION.

The appearances on dissection are an inflamed state of the pleura connected with the lungs, having its surface crowded with red vessels, and a layer of coagulable lymph lying upon it: adhesions also of the substance of the lungs to the pleura. Besides these, the lungs themselves, are often found in an inflamed state, with an extravasation either of blood or coagulated lymph in their substance. Tubercles and abscesses are likewise frequently met with.

COMMON PRACTICE.

1. Copious and repeating bleeding, even to fainting.
2. Blisters, nauseating doses of antimony, mercury, &c.

REFORMED PRACTICE.

I formerly bled in the commencement of this disease, but more recently I have almost, or entirely dispensed with it, and substituted treatment which I have found far less injurious, and much more effectual.

As soon as I am called to a patient laboring under an acute attack of the pleurisy, I administer two *tea-spoonfuls, of the Sudorific drops*, in half a pint of the infusion of *Catnip*, and repeat the same in half an hour, if the first dose does not relieve the severe pain in the side. The feet are to be bathed in tepid water and ley. In conjunction with these means, it will be necessary to apply the following fomentation to the side:

Cayenne or Red Pepper (*Epsicum Annuum.*)

Alcohol or best Brandy, one pint.

Simmer a few minutes together, then dip flannels in the same, and apply to the side. When cool, repeat the same. Should this not relieve the pain in one or two hours, apply the following fomentation:

Take Tanzy, (*Tanacetum Vulgare.*)
 Wormwood, (*Absy-thium Vulgare.*)
 Hoarhound, (*Marrubium Vulgare.*)
 Catnip, (*Nepeta Cataria Vulgare.*)

Boil all down together in a suitable quantity of water, and enclose the same in flannel, and apply to the side as warm as can be borne. This application mitigates the pain, relaxes the vessels, and prevents congestion. If there is much cough and difficulty of expectoration, give the following infusion:

Pleurisy root, (*Asclepias Tuberosa.*) half oz.

Bruise, add one pint of boiling water. Let this be drank freely through the day. This infusion acts as an expectorant and diaphoretic, and will be found altogether better than antimony. The drops recommended with the other auxiliaries, produces in a short space of time, a copious perspiration, and often cuts short the disease in a few hours, or at most in a few days, and without debilitating or injuring the system, or protracting the disease, as bleeding invariably does. Should the pain in the side, after the above treatment, continue, which very seldom is the case, apply a *Mustard Plaster* over the seat of it.

After submitting to this course of treatment, should not the inflammation be subdued, or nearly so, fifteen or twenty drops of the *Tincture of Digitalis* may be given every three or four hours, in a tumbler of *Pleurisy Root* tea. If the patient is not free of pain at night or should be very restless, give ten grains of the *Diaphoretic Powders*.

Purgatives must also be given every day or two.

REGIMEN.

The diet ought to be cool, slender, and diluting. The patient must avoid all food that is hard of digestion, and every thing of a heating or stimulating nature. This drink may be panado, gruel, &c.

Case 1.—Mr. A—— residing in Christie-street of this city, was supposed to be dying with pleurisy; catching for breath, and unable to articulate, so severe was the complaint. Cough excessive, and no expectoration. The *sudorific drops* were administered in a strong infusion of *catnip*, *fomentations* to his side, feet bathed, &c. The effect was in a very short time to produce a copious perspiration, which removed the acute symptoms almost immediately. In a few days he was well, and attending to his business.

Case. 2.—A lady in Essex-street was taken in a similar manner. The pain was so acute in the side, that it was with the utmost difficulty that she could breathe; constant inclination to cough; great fever, pulse tense, quick and hard; her distress was so very great, that I thought it best to bleed her, as it appeared that she could not live but a few minutes. I asked Dr. Downing, the physician who accompanied me (a real Brumonian) for his lancet. He objected to the bleeding, and immediately replied, “*administer the sweating drops.*” I hesitated, fearing that I should jeopardise the life of the patient, but finally concluded to try the powers of *vegetable* medicine alone. I accordingly administered it together with a large quantity of an infusion of *catnip*, with the other

medicines recommended, and relief was afforded in a few minutes. She rapidly recovered, and in a few days was about her business as strong as ever. Had this patient been bled, as is now practised by physicians, in all probability it would have killed her, or she would have suffered under the influence of debility for a long time. A small volume might be filled with similar cases.

We now ask, if the worst cases of pleurisy can be cured without bleeding, cannot every disease incident to the human body?*

CHAPTER XVII.

INFLAMMATION OF THE HEART, (*Pericarditis*.)

DESCRIPTION.

THIS is an inflammation of that membranous bag which surrounds the heart, the use of which is to secrete and contain the vapour of the pericardium, which lubricates the heart, and thus preserves it from concreting with the pericardium.

SYMPTOMS.

Pain in the region of the heart, suffocating weight, violent palpitation, motion of the heart, breathing by starts, dyspnea, or difficulty of breathing, increased by motion or exercise. Pressure also aggravates the symptoms. Pulse frequent and bounding; the countenance has a peculiar pale and haggard appearance.

COMMON PRACTICE.

Bleeding, blistering, mercury, &c.

REFORMED PRACTICE.

The treatment of this complaint is very similar to other inflammatory diseases. The *sudorific drops* may be given until perspiration is produced, and repeated occasionally to keep up a determination to the surface.

If the pain and symptoms are very acute, apply a *mustard plaster* over the region of the heart. The following pill may be given every four hours through the day:

Foxglove, (*digitalis purpurea*.) Pulverize, and form into a pill of two grains.

Should there be much distress, want of sleep, &c. give the *diaphoretic powders*; and give also freely an infusion of catnip, and let the feet be frequently bathed.

* It is intended, should there be room, to occupy a small portion of this work, for the purpose of giving illustrations of our practice; very few therefore will be given elsewhere.

CHRONIC INFLAMMATION OF THE HEART.

DESCRIPTION.

THE same symptoms as in the acute, but with less violence, and more protracted. It may arise from enlargement of the heart, or sub-acute inflammation of that organ.

TREATMENT.

Give the *digitalis pill* occasionally through the day. A strengthening plaster may be laid over the region of the heart, and the bowels be regulated by laxatives.

REGIMEN.

Great care is necessary in these complaints. No stimulating food, or liquor should be taken. Avoid violent exercise of every kind; great fatigue, and whatever has a tendency to debilitate the system. The food should be light, and in no respect stimulating.

CHAPTER XVIII.INFLAMMATION OF THE DIAPHRAM. (*Paraphrenitis.*)

DESCRIPTION.

THIS disease is produced by an inflammation of the diaphragm that divides the thorax from the abdomen, usually called the *Midriff*.

CAUSES.

The same as Pleurisy.

SYMPTOMS.

There is very violent pain which is deep seated under the short ribs, striking through to the back; breathing quick, small, and difficult; frequent sickness and hiccup; the pulse is small, hard, frequent and irregular. It is nearly connected with pleurisy.

TREATMENT.

The same as Pleurisy.

CHAPTER XIX.

INFLAMMATION OF THE STOMACH. (*Gastritis.*)

DESCRIPTION.

THIS is an inflammation of the coat or coats of the stomach, characterized by fever, great anxiety, heat, pain over the region of the organ, increased when any thing is taken into the stomach, hiccup, pulse small, hard, and great debility.

CAUSES.

Inflammation of the stomach is produced by acrid substances taken into the stomach, such as arsenic, antimony, mercury, &c. Likewise by food of an improper kind; drinking cold liquor when the body is heated. It may be brought on by inflammation of some of the neighbouring parts attacking the stomach.

SYMPTOMS.

Burning heand, pain and swelling, particularly after any liquor has been swallowed; hiccup, cold extremities, hard, quick and tense pulse, pain which is produced by pressure. There is also great thirst; when any thing is ate or drank, it produces great difficulty of breathing and swallowing—sometimes syncope and fits will ensue. There is restlessness, with continual tossing of the body, and great prostration of strength.

PROGNOSIS.

The event of this disease is seldom favourable, especially under common treatment, as the patient is usually taken off by the violence of the inflammation, or else it terminates in suppuration, ulceration, or mortification.

If the symptoms are very mild, and proper remedies have been employed, it may terminate favourably by resolution in one or two weeks, or it may become chronic in its character.

DISSECTION.

Fatal cases of this disease show on dissection a considerable redness of the inner coat of the stomach, having a layer of coagulable lymph lining its surface. They likewise show a partial thickening of the substance of the organ, at the inflamed part, the inflammation seldom extending over the whole of it. Where ulceration has taken place, the ulcers sometimes are found to penetrate through all its coats, and sometimes only through one or two of them.

COMMON TREATMENT.

Repeated bleedings, blisterings, &c.

REFORMED PRACTICE.

The *Indications of Cure* will be to allay the irritability of the stomach, by lessening the inflammation.

In this disease, it will be necessary to give cooling and mucilaginous drinks, and none will be found better than the mucilage of *slippery-elm bark*. Apply warm fomentations to the stomach, and remove them as they grow cool. An ounce of sweet oil must be given every day, and if the vomiting is very troublesome, a soda powder may be taken as often as it occurs. Should this not mitigate the symptoms, the *Diaphoretic Powders* must be given, ten grains at a dose, as often as the pain becomes violent. The feet must be often bathed, and should the disease continue obstinate, apply a *Mustard Plaster* over the region of the stomach, and afterwards between the shoulders.

Vomiting.—Should vomiting continue, give the following:

Bicarbonate of Potash, 1 dram.

Mint Water, 8 ounces. Mix.

Give a tea-spoonful or two, occasionally, or as often as the vomiting occurs.

All acrimonious, heating, and irritating food and drink are carefully to be avoided. The weakness of the patient may deceive the bystanders, and induce them to give him wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit too, may often impose on the attendants, and make them think a vomit necessary; but that too is very fatal and serious. The food must be light, thin, cool, and easy of digestion; it must be given in small quantities, and should neither be quite cold, nor too hot. Thin indian meal gruel has a charming effect in this complaint; light toasted bread dissolved in boiling water, or very weak chicken broth are very proper. The drink should be clear whey, barley water, in which toasted bread has been boiled, or decoctions of mucilaginous vegetables, as *Marsh Mallows*, *Bene Plant*, and *Slippery Elm*.

CHAPTER XX.

INFLAMMATION OF THE LIVER. (*Hepatitis.*)

DESCRIPTION.

By this disease, we understand an inflammation either in the membranes or substance of the liver, characterized by febrile excitement, with tension and pain of the right hypochondrium, or side often pungent, like that of pleurisy, but more frequently dull, or obtuse, a pain at the top of the shoulder blade and clavicle, and in the right side; difficulty of breathing, dry cough, vomiting, and hiccup. Yellowness of the eyes sometimes appear. This disease is either chronic or acute.

CAUSES.

The causes are all those producing inflammation, schirrhous tumours in the liver; injuries from external violence; biliary ducts; hot climate; obstructing the hepatic ducts; any thing that suddenly cools the liver after it has been much heated; drinking largely of wines and spirituous liquors; eating hot, spicy aliment; violent exercise; exposure of the heated body to the cold air, &c.

Those who have exposed themselves to the destructive habit of drinking to excess, are particularly liable to diseases of the liver. Tubercles, schirrhous hardness, and chronic inflammations, are the change which, in general, are produced in this organ, by this pernicious practice.

SYMPTOMS.

The *acute* species of hepatitis comes on with a pain in the right hypochondrium, or side, extending up to the clavicle and shoulder; which is much increased by pressing upon the part, and is accompanied with a cough, oppression of breathing, and difficulty of lying on the left side; together with nausea and sickness, and often with a vomiting of bilious matter. The urine is of a deep saffron colour, and small in quantity; there is loss of appetite, great thirst, and costiveness, with a strong, hard, and frequent pulse; and when the disease has continued for some days, the skin and eyes become tinged of a deep yellow. When the inflammation is in the cellular structure or substance of the liver, it is called by some *hepatitis parenchymatoso*, and when the gall-bladder which is attached to this organ, is the seat of the inflammation, it has been called *hepatitis cystica*.

The *chronic* species is usually accompanied with a morbid complexion, loss of appetite and flesh, costiveness, indigestion, flatulency, pains in the stomach, a yellow tinge of the skin and eyes, clay-coloured stools, high-coloured urine, depositing a red sediment and ropy mu-

cus; an obtuse pain in the region of the liver, extending to the shoulder, and not unfrequently with a considerable degree of asthma.

The symptoms are, however, often so mild and insignificant as to pass almost unnoticed; as large abscesses have been found in the liver upon dissection, which in the person's lifetime had created little or no inconvenience, and which we may presume to have been occasioned by some previous inflammation.

Hepatitis, like other inflammations, may end in resolution, suppuration, gangrene, or scirrhus; but its termination in gangrene is a rare occurrence.

PROGNOSIS.

The disease is seldom attended with fatal consequences of an immediate nature, and is often carried off by hæmorrhage from the nose, or hæmorrhoidal vessels, and likewise by sweating, by a diarrhœa, or by an evacuation of urine, depositing a copious sediment. In a few instances, it has been observed to cease on the appearance of erysipelas, in some external part.

When suppuration takes place, as it generally does, before this forms an adhesion with some neighbouring part, the pus is usually discharged by the different outlets with which this part is connected, as by coughing, vomiting, purging, or by an abscess breaking outwardly; but, in some instances, the pus has been discharged into the cavity of the abdomen, where no such adhesion had been formed.

DISSECTION.

On dissection, the liver is often found much enlarged, and hard to the touch; its colour is more of a deep purple than what is natural, and its membranes are more or less affected by inflammation. Dissections likewise show that adhesions to the neighbouring parts often take place, and large abscesses, containing a considerable quantity of pus, are often found in its substance.

COMMON PRACTICE.

Bleeding, mercury, and blistering.

REFORMED PRACTICE.

Indications of Cure.—As in all other inflammatory diseases, the first object will be to lessen the determination of blood to the part inflamed, by equalizing the circulation; to effect which, it will be necessary to produce a free perspiration. The feet must be bathed in warm water and ley, and a tea-spoonful of the *Sudorific Drops*, in half a pint of an infusion of *Catnip* must be given every hour until the pain ceases or perspiration is produced or promoted. The patient must drink freely of *Balm* or *Pennyroyal tea*. Let fomentations be applied warm to the side, or over the region of the liver. Should they not take off the tension, and afford relief, apply *Cayenne Pepper* and brandy simmered a few minutes together. These may be applied as often, and as warm as the stomach can bear. A purgative must be given daily while

the acute symptoms continue. In this disease vomiting is a very attendant symptom, to allay which give the following mixture:

One dram of Supercarbonate of Potash.

Peppermint water, 8 ounces. Mix.

Give a table-spoonful as often as the vomiting returns. This will allay the irritability of the stomach. Should not these applications mitigate the symptoms, apply the following plaster to the side.

Take Mustard.

Red Cayenne Pepper, equal parts.

Indian meal, a table-spoonful.

Vinegar sufficient to form a plaster, or poultice of suitable consistence.

Apply warm to the side, and continue it as long as the patient can bear. I have occasionally applied a blister in this disease, but I find that *Mustard Plasters* do much better. Blisters should be dispensed with, their effect always proving very troublesome and not unfrequently serious. If the pain continue severe and prevent sleep, ten grains of the *Diaphoretic Powders* may be given in *currant jelly*, roasted apple, or any other convenient vehicle, every two hours until relief is afforded.

If the stomach continue to exhibit a morbid state, which is sometimes the case from sympathy, great relief will be found by giving a mild emetic of the tincture of lobelia every other morning or evening. This will stimulate the liver to healthy action when other means fail, and should the disease be so obstinate as to resist the above treatment, which with me has been invariably successful, cupping may be resorted to. One application of which is far better than many bleedings from the arm.

REGIMEN.—The same regimen is to be observed in this as in other inflammatory disorders. All heating articles are to be carefully avoided, and cool diluting liquors, as whey, barley water, &c. drank freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet.

CHRONIC INFLAMMATION OF THE LIVER.

DESCRIPTION.

Sometimes inflammation of the liver becomes chronic in its character as before mentioned, arising from long continued intermittents, and other causes. The symptoms are a dull pain in the right side, and top of the shoulder, the stomach sometimes disordered, yellow tinge of the skin, and often a swelling over the region of the liver.

TREATMENT.

Tincture of lobelia may be given two or three times a week, and our *Common Purgatives* administered as often. Deobstruent medicines must likewise be given, as the following:

Extract of Dandelion Root, three grains.

Form a pill, and give two or three at a dose every day. Apply our common strengthening plaster to the side, and let it remain for several weeks. If the disease prove obstinate, give a portion of *mandrake*, twice a week.

Some are in the habit of applying mercurial ointment over the region of the liver. Commodore Lewis's wife, of Perth Amboy, N. J. communicated the following circumstance to me. Her husband was stationed in the Isle of Wight, during which she resided with him. The intendant of the island, afflicted with a liver complaint, was given over by five physicians as incurable. He had become unable to move in bed with an enormous swelling of the liver, emaciation, &c. He was prevailed upon to apply to a physician who was reputed to be very skilful, but who was much despised by the other physicians. He came, and commenced rubbing an ointment over the region of the liver; and from that very hour he began rapidly to recover, and in a short time became entirely well. Such confidence had Mrs. Lewis in this medicine that she purchased a jar of it, and soon after this, she set sail in a transport ship for America. During her passage she was attacked with the same complaint, chronic inflammation of the liver. She requested the lady who accompanied her, Mrs. W. to bathe her side every day, the effect of which was to diminish the pain, and mitigate all the symptoms, and it soon cured her. After relating this circumstance she handed me a small quantity of the same ointment, which, she stated, she had kept in her possession 25 years. I took it, and employed Mr. Chilton, of this city, to analyse the preparation, and to inform me particularly whether it contained any mercury, as I supposed this was the basis of it. He informed me that it contained not a particle, although I am induced to believe that it did contain that mineral, from the fact, that the lady who bathed the side of the patient, was *slightly* salivated, while it had no such effect upon the subject of the disease. As great an enemy as I am to mercury, I am willing to admit that it may sometimes exert a beneficial effect upon the liver used in this manner; but at the same time it is no longer a question, whether it does not produce more mischief than benefit.

CHAPTER XXI.

INFLAMMATION OF THE SPLEEN. (*Splenitis*.)

DESCRIPTION.

THIS disease very much resembles inflammation of the liver, but the pain is in the left side.

SYMPTOMS.

It is characterized by fever, tension, heat, tumour, and pain in the left hypochondrium or side, increased by pressure. This disease comes on with a remarkable shivering, succeeded by a most intense heat and very great thirst; a pain and tumour are perceived in the left hypochondrium, and the paroxysms for the most part assume a quartan form; when the patients expose themselves for a little to the free air, their extremities immediately grow very cold. If a hæmorrhage happens, the blood flows out of the left nostril. The other symptoms are the same with those of the hepatitis, or inflammation of the liver. Like the liver, the spleen is also subject to a chronic inflammation, which often happens after agues, and is called the "ague cake," though that name is also frequently given to a schirrous tumour of the liver succeeding intermittents.

CAUSES.

The causes of this disease are the same with those of other inflammatory disorders; but those which determine the inflammation to that particular part more than another, are very much unknown more than cold. It attacks persons of a very plethoric and sanguine habit of body rather than others.

COMMON PRACTICE.

Bleeding, mercury, and blistering.

REFORMED PRACTICE.

During the acute stage of this disease, we must prescribe remedies to subdue the inflammation.

1. Give a purgative every day, or every other day, according to the strength of the system, and severity of the disease.
2. Give *sudorific medicines* to produce perspiration.
3. Apply Cayenne pepper, (*capsicum annuum*,) mixed and simmered with spirits to the part.
4. Should this not relieve the pain, and mitigate the symptoms, a mustard plaster may be applied to the side, or over the region of the spleen.

CHRONIC INFLAMMATION OF THE SPLEEN.

The spleen sometimes becomes enlarged, and suppurates. This may be known by the soft or schirrhous feeling. In either case it is seldom attended with danger. Should symptoms of suppuration appear, a poultice may be applied to the part, and thus be promoted. Should the spleen become soft and pulpy, and partly destroyed, as is sometimes the case, a plaster may be applied to the side, composed of equal parts of rosin and common soap, melted together, and spread on a piece of thin leather to the side, and purgatives and emetics occasionally used, together with electricity.

CHAPTER XXII.

INFLAMMATION OF THE INTESTINES. (*Enteritis.*)

DESCRIPTION.

An inflammation of the mucous membrane lining the intestines. This disease is characterized by fever, fixed pain in the abdomen, costiveness, and vomiting.

CAUSES.

An inflammation of the intestines is occasioned by long continued costiveness or hardened feculent matter lodged in some part of the tube; by the strangulation of a protruded portion of the gut in a rupture, by preceding colic, eating unripe fruits or great quantity of nuts, and by schirrous tumours of the intestines, or strictures; but the most frequent causes is exposure to cold, particularly when applied to the lower extremities or belly itself, and occasionally by cold drink swallowed when the body is much heated by exercise.

SYMPTOMS.

This dangerous and painful disease is characterized by acute pain in the bowels, which is much increased upon pressure, and shoots round the navel in a twisting manner; there is obstinate costiveness, tension of the belly, and a vomiting generally bilious, or dark and fetid; the urine is high coloured, the pulse quick, hard, and contracted, with some degree of febrile heat, thirst, and great depression or loss of strength. The patient is constantly belching up wind, and, in protracted cases, he even discharges excrement by the mouth, the motion of the intestines becoming inverted from their being no passage downwards.

DISCRIMINATION.

The only disease which can be mistaken for this, is colic; but an inflammation of the intestines is accompanied with fever, the other not; the pain moreover is considerably increased by pressure with the

hand on the belly, whereas in colic it is thereby somewhat relieved. The chief symptom indeed which distinguishes inflammation of the intestines from a colic is the extreme tenderness of the belly to the touch in the former disease, which, coupled with a quick small pulse and other appearances usually attending on an inflammation of the intestines, cannot fail to point out with great certainty the nature of the malady.

There is also in inflammation of the intestines or bowels, considerable swelling.

PROGNOSIS.

The following symptoms denote a favourable termination, viz., the pulse losing its frequency and becoming natural; the pain changing its seat, and not being confined to a particular part, the belly becoming less tender to the touch and less painful; stools taking place; the urine depositing a sediment; and a warm equable sweat diffused over the body. The symptoms which have already been enumerated as indicative of a mortification having taken place, point out approaching dissolution.

If by the adoption of proper means at an early period we are able to subdue the inflammation, and copious evacuations by stool ensue, then there will be a gradual diminution of all the symptoms, and in due time health will be restored; but when there is a sudden cessation of pain and anxiety, and the patient becomes calm and collected, the countenance assumes a livid and cadaverous hue, and the pulse intermits, hiccups and startings of the tendons takes place, the face and hands are bedewed with clammy sweats, and the extremities become cold, we may be assured that a mortification has taken place.

DISSECTION.

Dissection of this disease show, that the inflammation pervades the intestinal tube to a very considerable extent; that adhesions of the diseased portion to contiguous parts are formed; and that, in some cases, the intestines are in a gangrenous state, or that ulcerations have formed. They likewise show, that, besides obstinate obstructions, intromission, constrictions, and twistings, are often to be met with; and that, in most cases, the peritonæum is more or less affected, and is perceived, at times to be covered with a layer of coagulable lymph.

COMMON TREATMENT.

Bleeding copious and repeated, blistering, laudanum, mercury, &c.

REFORMED PRACTICE.

Stimulating purgatives should be avoided in this disease, as they are calculated to exasperate it. The most antiphlogistic or cooling treatment and regimen must be followed. The feet should be frequently bathed. An ounce of *cold pressed castor oil* may be given every two hours, until it acts upon the bowels, and afterwards administered as occasion requires. in strong ley water, and warm fomentations applied to the abdomen.

Should not this operate as a laxative or purgative, administer the following injection.

Take one pint of the infusion of Slippery Elm Bark, (*Ulmus Fulva*.)
 One pint of milk,
 Olive or sweet oil, (*Oleum Olivarum*,) 1 gill,
 Molasses, half a pint,
 Bi-Carbonate of Potash, 1 drachm,
 Laudanum, half an ounce. Mix.

Administer this injection blood-warm, with a French syringe, to be repeated according to the urgency of the symptoms. If the pain is severe, it may be given every two hours.

To allay the irritation of the stomach, and vomiting, which not unfrequently attend this disease, as well as to mitigate urgent symptoms, ten grains of the *Anodyne* or *Diaphoretic Powders*, may be given every two hours till relief is afforded, and a dose also given every night.

Bleeding and blistering is much resorted to in inflammation of the intestines; yet I have never known any benefit derived from it. But on the contrary much injury.

Should not this treatment arrest the complaint in a short time, the following fomentation may be applied:

Take Tanzy, Wormwood, Hoarhound, and Hops,

Boil all in vinegar and water, then enclose them in flannel or muslin; apply to the abdomen, and change them often.

Should vomiting be a predominant symptom, the following preparation may be given.

Infusion of Spearmint, (*Mentha Sativa*) 8 ounces,
 Sal Æratus, [*Bicarbonate of Potash*] 1 drachm.

Give a table-spoonful every hour.

The inflammation sometimes is so great that the passage of the bowels seems closed so that nothing will pass them. Should this be the case, and should not the means already prescribed prove effectual, the patient may be put into a warm bath, and occasionally repeated. Should the swelling, inflammation, or pain, continue after the above treatment, let a *Mustard Plaster* be applied to the bowels, and kept on till the skin is reddened.

A repetition of the same means must be continued until the patient is cured.

REGIMEN.

The regimen in this disease should by no means be stimulating, but the reverse. The most cooling, demulcent and diluting, such as *Slippery Elm*, *Flax Seed*, *Barley water*, *clear Whey*, &c.

INFLAMMATION OF THE PERITONÆUM.

This membrane envelops and surrounds all the different organs which are sealed in the abdomen, or cavity of the belly; it defends them from injury by any motion or concussion, and their whole mass is prevented through its means from being misplaced by their own weight.

The disease is accompanied by symptoms pretty similar to the same affection of the intestines just pointed out; it arises from the same causes and must be treated in a similar manner.

CHAPTER XXIII.

INFLAMMATION OF THE KIDNEYS, (*Nephritis*.)

DESCRIPTION.

Inflammation of the kidneys is known by fever, pain in the region of the kidneys, and shooting along the course of the ureter; drawing up of the testicles; numbness of the thigh; vomiting; urine high-coloured, and frequently discharged; costiveness, and colic pains. Nephritis is symptomatic of calculus, gout, &c.

CAUSES.

The causes which give rise to nephritis are external contusions, strains of the back, acrids conveyed to the kidneys in the course of the circulation, violent and severe exercise, either in riding or walking, calculous concretions lodged in the kidneys or ureters, and exposure to cold. In some habits there is an evident predisposition to this complaint, particularly the gouty, and in these there are often translations of the matter to the kidneys, which very much imitate nephritis.

SYMPTOMS.

This disorder is characterized by an acute, pungent, or more frequently an obtuse or dull pain in the region of the kidneys, shooting along the course of the ureters, or ducts which convey the urine from them into the bladder; pain also in the small of the back, together with a fever, and frequent discharge of urine which is small in quantity, red and high coloured, yet in the highest degree of the disease, watery and limpid; the thigh feels benumbed, and there is a pain in the groin and testicle of the same side, together with a retraction. There are, moreover, continual eructations with bilious vomitings, debility, &c.

This disease sometimes assumes a chronic form, known by heat, pain, &c. over the loins.

DIAGNOSIS.

This inflammation may be distinguished from the colic by the pain being seated very far back, and by the difficulty of passing urine, which constantly attends it; and it may be distinguished from rheumatism, as the pain is but little influenced or increased by motion.

Nephritis is to be distinguished from a calculus in the kidney or ureter, by the symptoms of fever accompanying, or immediately following the attack of pain, and these continuing without any remarkable intermission; whereas, in a calculus of the kidneys or ureter, they do not occur until a considerable time after violent pain has been felt. In the latter case, too, a numbness of the thigh, and a retraction of the testicle on the affected side, usually takes place.

DISSECTION.

Dissections of nephritis show the usual effects of inflammation on the kidney; and they likewise often discover the formation of abscesses, which have destroyed its whole substance. In a few instances, the kidney has been found in a scirrhus state.

COMMON TREATMENT.

Bleeding, calomel, antimony, opium.

REFORMED PRACTICE.

The first object to accomplish is to relax the system, by producing perspiration. If the pain be violent, apply over the seat of the disease the following fomentation of bitter herbs :

Take Hops,

Wormwood, equal parts.

Simmer in vinegar and water, apply warm and renew often.

The following formula may be given to diminish the inflammation of the kidneys, to promote the urinary discharge, &c.

Take Spirits of Nitre, (*Spiritus Nitri Dulcis*) 1 ounce.

Balsam of Copaiva, (*Copaifera Officinalis*) half ounce,

Spirits of Turpentine, (*Spts. Terebenth*) 1 ounce.

Oil of Sweet Almonds, (*Ol. Amyg.*) 1 ounce,

Gum Camphor, 1 dram.

Mix.

Give a tea-spoonful three or four times through the day, in one or two tea-spoonfuls of the mucilage of *Gum Arabic*. At the same time give through the day the following decoction :

Take Marsh Mallows,

Queen of the Meadow, equal parts.

Make a strong decoction, drink freely and warm. This promotes the discharge of urine, and allays irritation.

It will be necessary if the patient be of a costive habit, to give a purgative every day or two, according to the violence of the disease. Sometimes spasms arise from irritation of gravel passing the ureters. When this is the case, an *Opium Pill* containing two or three grains may be administered every two hours until relief is afforded, and the patient may be put into a warm bath. This usually affords great and sudden relief.

When the disease is chronic, and there is pain in the small of the back, &c. let the part affected be bathed with the fol-low :

Red Pepper or Cayenne, (*Capsicum*,) 1 ounce.

Alcohol, 1 pint.

Bathe the parts two or three times a day, and use the drops mentioned above. In the course of a few days, or when the inflammation has measurably subsided, apply a strengthening plaster to the back.

Vomiting.—Should the disease be attended with vomiting, which is often the case, give *Sal Æratus*. One tea-spoonful may be dissolved in half a pint of cold water, a table-spoonful given as often as vomiting takes place. At the same time give an infusion or tea of *Peppermint*.

REGIMEN.

Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, Indian gruel, broths, with mild vegetables, mint tea drank freely. Emollient and thin liquors must be plentifully drunk; as clear whey, or balm-tea sweetened with honey, decoctions of marsh-mallow roots, with barley, &c. The patient, notwithstanding the vomiting, must constantly keep sipping small quantities of these or other diluting liquors. Nothing so safely and certainly abates the inflammation, and expels the obstructing cause, as copious

dilution. The patient must be kept easy, quiet, and free from cold, as long as any symptoms of inflammation remain.

Let the feet be often bathed.

CHAPTER XXIV.

INFLAMMATION [OF THE WOMB. (*Hysteritis.*)

DESCRIPTION.

THIS disease is characterized by fever, heat, tension, tumour, pain in the region of the womb and vomiting.

CAUSES.

Besides the common causes productive of inflammation, this disease sometimes takes place after delivery, particularly where the labour has been long protracted, instruments have been used, or the lochial discharge which ought to have taken place has been suddenly stopped by an exposure to cold.

SYMPTOMS.

It is accompanied by pains in the lower region of the belly, which are greatly aggravated upon pressure with the hand, as also by tension or tightness of the surrounding parts, considerable depression of strength, a change of countenance, increased heat of the whole body, great thirst, nausea, and vomiting. The pulse is weak, but hard and frequent; the bowels confined, the urine high-coloured and scanty, the secretion of milk somewhat interrupted, and the lochial discharge much diminished if not wholly suppressed.

Inflammation of the womb is always attended with danger, particularly if the symptoms run high, and proper means to arrest its progress are not promptly adopted; for in such cases it is apt to terminate either in suppuration, scirrhus, or a mortification.

COMMON TREATMENT.

Bleeding, blistering, &c.

REFORMED TREATMENT.

Perspiration ought to be promoted as soon as possible. An infusion of *catnip* should be drank freely with a tea-spoonful of the sweating, or sudorific drops. The abdomen should be freely fomented as in other inflammatory diseases.

When there is great irritation, an *Anodyne* may be administered; ten grains of the *Diaphoretic Powders*.

A *Cathartic* may be occasionally given.

INFLAMMATION OF THE BLADDER. (*Cistitis*.)

DESCRIPTION.

THIS disease is characterized by pain in the region of the bladder, attended with fever, and hard pulse, frequent, painful discharge of urine, with suppression and general tenesmus.

CAUSES.

It is occasioned by an improper use of acid medicines, such as cantharides; by inflammation extending along the urethra or urinary channel; by permanent or spasmodic stricture; by local irritation, from the lodgment of a stone; by hardened fœces, or a diseased state of the prostrate gland; and by mechanical injury, as well as by all the usual causes of inflammation.

SYMPTOMS.

Where this disease exists, an acute burning pain and some degree of tension at the bottom of the belly, with a constant desire to make water, a difficulty in voiding it, or total stoppage, a frequent inclination to go to stool, much uneasiness and heat, a general febrile disposition, a frequent and hard pulse; sickness and vomiting not unfrequently attend.

TREATMENT.

We must employ similar means in this disease, as in the inflammation of the kidneys. The *Hip* or *Warm Bath* may be employed morning and evening.

The *Diuretic* drops must be given, also *Mint* and *Barley* tea.

Fomentations of bitter herbs must also be applied over the region of the bladder.

The patient should abstain from every thing that is of a hot, acrid, and stimulating quality; and should live entirely upon small broths, gruels, and mild vegetables.

Purgatives must also be administered.

CHAPTER XXV.

RHEUMATISM, (*Rheumatismus.*)

DESCRIPTION.

The rheumatism is a very painful disease which affects the muscles and joints in different parts of the body, and, in many cases, so nearly resembles the gout as to be distinguished from it with difficulty. It makes its attacks in all seasons of the year when the atmosphere is moist and variable, but is more frequently met with in the autumn and spring. It is sometimes accompanied with fever, and sometimes there is none. In the former instance, it is known under the name of acute rheumatism: in the latter, it is called chronic rheumatism.

CAUSES.

Obstructed perspiration, occasioned either by laying in damp linen or damp unventilated rooms, wearing wet clothes, or being exposed to cold air, after having been much heated by exercise, or other ways, may be considered the chief and most frequent causes of the rheumatism.

The gout is the disorder which most nearly resembles the rheumatism, but in the latter, it is principally the large joints which are affected; moreover, the pain frequently shifts its seat, and follows the course of the muscles in its transition to other parts. Besides, it is in general preceded by flatulency and indigestion, as is the case in gout; and it occurs at any period of life, whereas gout is usually confined to adults.

PROGNOSIS.

The deposit of a reddish sediment in the urine, or its becoming cloudy, with a general but gentle moisture on the skin, are to be regarded as very favourable appearances in acute rheumatism; but the inflammation assuming a dark red colour, followed by vesications, as in bad cases of erysipelas; the urine being pale, the febrile symptoms very high with delirium, or translations of the inflammation to the head, chest, heart, diaphragm, stomach, or other organs contained in the cavity of the belly, and producing the symptoms of the primary diseases of these parts, are to be considered as very dangerous.

SYMPTOMS.

The acute rheumatism generally commences with weariness and shivering, succeeded by heat, thirst, restlessness, anxiety, a hard, full, and quick pulse, and all the usual symptoms of inflammatory fever. After a short lapse of time, acute pain is felt by the patient in one or more of the large joints of the body, and these are followed by a tension and swelling of the parts so affected. The pain is transito-

ry, and generally, shift from one joint to another, leaving the part it occupied, red, swollen, and very tender to the touch. The tongue is white, the bowels are obstinately costive in general, the urine is high coloured, the pulse full and hard; the blood, when drawn from a vein, exhibits a thick buffy coloured coat on its surface, as in pleurisy; and sometimes there is a profuse sweating, unattended however by any relief. When the patient is in bed, the pains are usually much increased, and he cannot bear the least motion without their being highly aggravated.

The chronic form of rheumatism may either be a consequence of the termination of the acute, or it may be independent of it. In the first cases, the parts which are affected with inflammation, are left rigid, weak, and, in some instances, puffed up, and the pain not being moveable, is now confined to particular parts; sometimes, however, it shifts from one joint to another, but without being accompanied by any inflammation or fever. In the latter cases, where it has risen from an exposure to cold and sudden vicissitudes of the weather, pain seizes the head, shoulders, knees, loins, wrists, and other parts; and these often continue for a considerable length of time, and then go off, leaving the seat they occupied in a state of debility.

Very alarming and fatal symptoms sometimes follows the recession of Rheumatism. It passes to the *heart, diaphragm, stomach, bowels*, and every part of the body. When it is translated to the heart, the patient is seized with acute pain and great anxiety over that region, palpitation, partial fainting, pale, distressed countenance. When it is translated to the brain it is attended with heaviness, with acute pain in the head, intolerance of light and sight, wild and anxious expression of countenance, occasional delirium, &c. When the stomach is affected by a recession of this disease, pain, nausea, and vomiting. Sometimes the bladder is affected with rheumatism producing a retention of urine and pain over the seat of that organ. Sometimes it is translated to the lungs and pleura which becomes affected, producing an inflammation of those parts. Sometimes it passes to the uterus, or womb, &c.

Dr. Cox, of England, states that the numerous cases of organic disease of the heart and pericardium which he met with at Guy's Hospital were referable to, or connected with Rheumatism. All of which symptoms unquestionably arises from a retention of *morbid humours* in the system.

DIAGNOSIS.

The Ancients considered Gout and Rheumatism the same; but it is very evident that there is a great difference between the two diseases. The characteristic difference between Gout and Rheumatism is, that the former attacks the small joints, while the latter attacks the system generally. Besides, the Rheumatism is generally produced by sudden changes of the atmosphere, while the Gout is produced by the want of *exercise*, the use of *wine*, rich, high seasoned and stimulating articles of diet.

PROGNOSIS.

The acute rheumatism is not frequently accompanied with much danger; but, in a few instances, the patient has been destroyed by general

inflammation, and now and then by a recession of the morbid matter to some vital part, such as the head and lungs. Acute rheumatism, altho' accompanied with a considerable degree of inflammation in particular parts, has seldom been known to terminate in suppuration; but a serous or gelatinous effusion takes place.

DISSECTION.

Rheumatism seldom proving fatal, very few opportunities have offered for dissections of the disease. In the few which have occurred, the same appearances have been observed as in inflammatory fever; effusion within the cranium, and now and then affections of some of the viscera:

COMMON TREATMENT.

Bleeding, blistering, mercury, antimony and opium:

REFORMED PRACTICE.

Indications of Cure.—The first and great object in acute rheumatism is to lessen the inflammatory action and lower the fever:

A late author, Dr. Eberle, writes: The very profuse sanguineous evacuations so frequently resorted to in this complaint, so far from proving beneficial, lead often to very disastrous consequences; for experience has fully established the fact, that metastasis of the local affection to an internal organ is particularly favored by thus draining the system of its blood, and impairing the vital energies.

"We have long been convinced," says Dr. Johnson, "from attentive observation; that the system of detracting large quantities of blood in cases of acute rheumatism, is productive of more frequent metastasis, or a translation of the disease from the extremities to internal organs, than a more moderate treatment. If we do quell the external inflammation, a retrocession to some weakened organ is but too apt to take place. Of this we have seen several instances." The records of medicine furnish us with many examples illustrative of the correctness of this observation. The case reported by Dr. Kemper is a striking instance of this kind. This was a strongly marked instance of inflammatory rheumatism; the fever was violent, and the "joints of her limbs, from the elbows and knees downwards, were affected with swelling, redness, and most acute pain." In five days nearly eleven pints of blood were abstracted from the patient. Metastasis of the disease soon took place, first to the lungs and then to the head. At last the rheumatic affection returned to the extremities and relieved the internal organs.* Dr. Armstrong, also, has related a case of this kind. The inordinate use of the lancet, by debilitating, is, moreover, apt to prolong the disease in a sub-acute, or chronic state, and to strengthen the predisposition to a recurrence of the affection. "In no way," says Scudamore, "is a degeneracy into chronic symptoms so certainly induced, as by that injudicious employment of general bleeding which enfeebles the constitution, and still leaves the

* Philadelphia Journal of Medical and Physical Sciences, No. 12.

† London Medical and Physical Journal, No. 289.

rheumatic disposition in great force. Nor does the articular disease itself yield to the use of general bleeding in the manner which we might expect.”*

Is it not remarkable that such a great change should take place in the minds of physicians as regards the treatment of this disease? They have ever considered it of the greatest importance to bleed copiously and repeatedly, and this is agreeably to their pathological views of acute rheumatism, being characterized by so much inflammation. Are they not as liable to be mistaken in their views and treatment of other diseases?

Purgatives.—In this complaint it will be necessary,

1st. To give purgatives. Two or three operations are far more beneficial than several bleedings. The *common Vegetable Purgative* may be given, and repeated two or three times a week.

2d. *Sudorifics.*—It will be of the highest importance to administer Sudorifics, and to promote free perspiration. For this purpose the vapour bath may be used, if the patient be able to sit up, otherwise a tea-spoonful of the *Sudorific Drops* may be given every two hours till perspiration takes place, and afterwards to be given occasionally to keep up a moisture of the skin, to be aided by drinking freely of an infusion of *Catnip*.

Gentle and uniform perspiration is always serviceable.

Emetics.—Some persons speak highly of emetics; I cannot speak of their effects from experience, never having used them in this complaint.

Anodynes.—If the pain prevents sleep, ten grains of *Diaphoretic Powders* may be given at bedtime in syrup or molasses.

Oils or Liniments.—The following liniment may be used:

Take Oil of Hemlock, 1 oz.

Alcohol, 1 quart.

Mix.

Let this be occasionally applied blood warm to the parts most painful and swelled.

If the inflammation be very acute, and the heat and swelling considerable, bathe the body with the following wash:

Take Spirits, half a pint,

Vinegar, half a pint,

Rain-water, half a pint,

Salt, half an ounce.

Mix.

Let it be applied tepid to the surface of the body, with a piece of flannel, three or four times in the course of the day. This wash often affords great relief, by lessening the heat, pain, and swelling.

Should there be much swelling and pain in the joints after the above application, they may be bathed with the following mixture:

Take Oil of Turpentine, (*Ol. Terebinth.*) 1 oz.

Camphor, half an oz.

Alcohol, 1 pint.

Mix.

Bathe the parts blood warm occasionally, or when there is much pain.

* A Treatise on the Nature and Cure of Rheumatism, London, 1827, page 70.

The patient may drink through the day the following infusion :

Take White Pine leaves or buds, 1 oz.

Hemlock leaves, 1 oz.

Boiling water, 1 quart.

A wine glass to be taken at a dose, and as often as the stomach can bear.

When there is great tension, swelling, and pain of the joints, the following poultice will be found excellent :

Simmer together a short time, *Bran* and *Vinegar*, until a poultice of proper consistence is formed, and apply tepid. I have known this simple mixture afford relief when all other applications have proved useless.

This treatment will be found very effectual in curing inflammatory rheumatism ; although the disease under the best treatment will be sometimes protracted, at other times it is cured very soon. By the common treatment, it often degenerates into the chronic rheumatism, or is attended with other very serious consequences.

REGIMEN.

Cool and diluting diet, consisting chiefly of vegetable substances, milk, &c. will be the most proper. Nothing heating should be prescribed in food or drink. Buttermilk may be drank freely ; also, barley water and gruel.

CHRONIC RHEUMATISM.

DESCRIPTION.

The chronic rheumatism differs from the acute in its not being attended with fever or much inflammation, and the pain being usually confined to some particular part of the body, as the shoulders, arms or loins ; but it is apt to occupy those joints which are surrounded by many muscles, and particularly such muscles as are employed in the most constant and vigorous exertions. When it affects those of the loins, it is called *lumbago* ; when seated in the hip joint, it is known by the name of *sciatica*.

CAUSES.

The causes of rheumatism are frequently the same as those of an inflammatory fever, viz. an obstructed perspiration, the immoderate use of strong liquors, sudden changes of the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The most extraordinary case of a rheumatism that I ever saw, says a writer, where almost every joint of the body was distorted, was a man who used to work one part of the day by the fire, and the other part of it in the water. Very obstinate rheumatisms have likewise been brought on by persons not accustomed to it, allowing their feet to continue long wet. The same effects are often produced by wet clothes, damp beds, sitting or lying on the damp ground, travelling in the night, &c.

The rheumatism may likewise be occasioned by excessive evacuations, or the stoppage of customary discharges. It is often the effects of chronic diseases, which vitiate the humours; as the scurvy, the *lues venerea*, obstinate autumnal agues, &c.

The rheumatism prevails in cold, damp, marshy countries. It is the most common among those who are ill-clothed, live in low damp houses, and eat coarse and unwholesome food, which contains but little nourishment, and is not easily digested.

SYMPTOMS.

The symptoms of chronic rheumatism, says Scudamore, are much less uniform and definite than those which characterize the acute form of the disease. Chronic is often the consequence of acute rheumatism; but it occurs also, frequently, as a direct consequence of exposure to cold and damp air, more especially when the system is under the influence of mercury. The affected parts are commonly neither swollen nor red; nor is there often any manifest fever connected with the chronic variety of the disease; although quickness, tension, and contraction of the pulse are in some instances present in the evening and during the night. The pain often wanders from one part to another, fixing itself by turns, in the head, shoulders, knees, wrists, fingers, hips, loins, &c.—more especially in those cases which approach the subacute character. Some individuals are hardly ever entirely free from pain; others are affected with it only occasionally, on the occurrence of damp and cold weather. In some instances, the pain is seated in the joints: in others, in the muscles and parts situated between the joints. After remaining at rest for a while the patient feels stiffness and pain on attempting to move the affected limb; but on using exercise, until the body becomes warm, both the pain and stiffness are apt to disappear. Those who are subject to this form of the disease generally feel a dull aching pain in one or more joints on the approach of stormy and rainy weather. Severe and inveterate cases of chronic rheumatism are apt to give rise to organic disease of the tendons, bursæ mucosæ, with wasting and hardening of the muscular structure about the affected parts. The joints stiff. A jelly-like effusion into the cavity of the affected joints occurs occasionally.

PROGNOSIS.

No danger is attendant on chronic rheumatism; but a person having been once attacked with it, is ever afterward more or less liable to returns of it: and an incurable ankylosis is sometimes formed, in consequence of very frequent relapses.

COMMON PRACTICE.

Sulphate of lime, stramonium, guaicum, &c. In some instances mercury and arsenic is recommended.

REFORMED PRACTICE.

Indications of Cure.—The object in this disease will be

1st. To stimulate the cutaneous vessels to a healthy action, and thus restore perspiration.

2d. To attenuate the thick viscid or sizzly state of the blood which invariably attends this complaint.

Internal Remedies.—The following syrup may be given :

Take Lignumvitæ shavings, (*Ligni. Guaic.*) 1 lb.

Sarsaparilla, (*Smilax Sarsaparilla*), 1 lb.

Sassafras Bark, (*Cort. Sassafras*), quarter of a pound,

Burdock Seeds, (*Sem. Arct. Lapp.*) quarter of a pound.

Boil the whole till the strength is extracted, then evaporate to four quarts. Add sufficient sugar to prevent fermentation. A wine-glass may be taken or given three or four times a day. This will have a decided good effect in this disease.

The following infusion may likewise be taken in conjunction with the above syrup.

Take White Pine Bark, (*Cort Pinus Sylvestris*),

Burdock Seeds, (*Sem. Arct. Lappa*),

Prickly Ash Bark, (*Zanthoxi lon Fraxineum*),

Virginia Snake root, (*Serpentaria Virginiana*).

Equal parts.

Make a strong infusion, and drink freely through the day.

After using the above prescription, should the complaint still prove obstinate, the following liquid may be administered.

Take Extract of Poke-berry, (*Phytolacca Decandria*), half an ounce,

White Pine Turpentine, (*Terebinth*), half an ounce.

Add one quart of Malaga wine. Half a wine-glass may be given three times a day, and the dose gradually increased to a wine-glass.

External remedies.—Bathe the parts with the following tincture :

Take Cayenne Pepper, (*Capsicum Annuum*), 1 oz.

Alcohol, 1 quart. Mix.

To be applied warm with a piece of flannel. The parts may also be bathed with the following :

Take Oil of Sassafras, (*Ol. Sassafras*), 1 oz.

Oil of Hemlock, (*Abies Canadensis*), 1 oz.

Oil of Red Cedar, (*Pinus Cedra Rubra*), 1 oz.

Oil of Spearmint, (*Menth. Sativa*), 1 oz.

Turpentine, (*Ol. Terebinth*), 1 oz.

Olive Oil, (*Ol. Oliv.*) 1 oz.

Camphor, (*Camphora*), 1 oz. Mix.

Bathe the parts two or three times a day warm.

The common strengthening plaster may be applied to the parts most affected after the use of the above articles, or when the disease is partially subsided.

The Vapour Bath may be occasionally used in this complaint. In consequence of the free perspiration it produces it will be found very serviceable.

REGIMEN.

A heating or stimulating diet may be used in this disease.

Cayenne pepper and *mustard* may be taken with food. Also, articles containing ginger.

Flannel should be worn during the day, and taken off at night. The greatest precaution should be observed to prevent a check of perspiration from the vicissitudes of the weather, or other causes.

MERCURIAL RHEUMATISM.

This disease is somewhat similar to the chronic, but more painful and more difficult to remove. It proceeds from the use of the universal panacea now given called mercury. At every change of the weather the person feels most intolerable pains; indeed his system is a complete thermometer by which he is enabled always to designate the variation of the weather. The treatment in this disease is similar to the chronic rheumatism. Sulphur and cream of tartar may be given internally, and a plaster composed of sulphur and Venice turpentine applied to the joints and renewed often. The syrup mentioned in the preceding disease may also be freely taken to eradicate the mercury from the system. The Vapour Bath will also be found useful.

The following is taken from "Dr. John Williams's last legacy to the world," and recommended in this disease.

Take Princes pine-tops,
Horse-radish roots,
Elecampane roots,
Prickly-Ash bark,
Bitter-sweet bark off of the root,
Wild-cherry bark,
Mustard Seed. A small handful of each. Make a decoction and drink.

One gill of tar water into one pint of brandy, or the same proportion. Drink a small glass before eating, three times a day.

The following remedy has been forwarded by a very respectable and judicious physician for insertion in this work.

"*For Sciatic, or Sciaticæ, Arteriæ.*—Make a beer of the following articles:

Spruce, Sage, Sarsaparilla, Hackmetac, or by another name, *Tamarac*, garden *Rhubarb*, *Elder roots*, the bark of *Burdock roots*, *Even roots*, or by some called *Even's root*, *Rheumety* or *Wintergreen*, such as bears the red aromatic berries, grows low, and keeps green throughout the winter, *Water-Cresses*.

Syrup.—*Spikenard, Comfrey, White Solomon's Seal, Johnswort, Sweet Egrimony, Prince's Feather*, or what is called "love lies a bleeding," (grows in the garden,) *Swamp Brake roots*, (a plenty,) one pound

of *Raisins*, two ounces of *Saffron*. Put all into an earthen pot, adding a course of sugar between each course of roots and herbs; cover the pot or jar with a rye dough or paste, put it in a hot oven, and when it is sufficiently digested, wring out the liquor, add one third rum or brandy. The beer is for common drink. The syrup is to be taken a wine-glass full two or three times a day.

Tamerac is a large tree, grows in some swamps and is evergreen.

A young woman, a relation of mine, when in her childhood, was more than ordinary sprightly, active, and healthy. At about the close of her youthful days she was afflicted with sciatic pains. Her parents were wealthy, and spared no cost or pains for her relief. They lived in Windham county, Conn. Her father employed the most renowned of the faculty from Hartford, New Haven, Rhode Island, and Boston; and after spending much money and suffering much grief for his beloved daughter, and her physicians had pronounced her case incurable, all hopes of her recovery were given up. At this time one of her legs was so much contracted, that her heel pressed so hard against the muscle glutæus major, that it gave her pain, and thus was she a cripple unable to help herself.

At length as Providence was pleased to restore her, he caused a poor indigent old man to pass that way, who called at her father's house to ask alms, who was taken in, and hospitably fed and clothed. The poor man saw her situation, pitied her case and kindly offered to pour in the oil and wine and healing balm as above, and in about two years after I saw her at a ball, and she danced as spiritedly as any lady in the circle and was well and sprightly. Some time after, (agreeably to her own language,) thinking of her late and present health and comfort, and what she had suffered, she felt conscientious of her duty towards her benefactor and Creator for her recovery, and besought the Lord in humble prayer and supplication to heal her soul, which prayer she felt conscious had been heard and answered; and thereby healed both body and soul.

I obtained from her the above receipts, and when I lived in Louisiana my book of recipes was pilfered from me. I wrote to this lady (about 2000 miles) who forwarded me a second set and wrote me the following: Her letter is this moment before me.

"According to your request I send you receipts for the beer and syrup which was so beneficial to me. Would to God I could find a remedy as effectual now, as I am in my advancing age, out of health. I wish to promulgate it as a donation to suffering humanity."

"In all instances of sciatica, during my practice, I found this medicine a sovereign specific; and I well know that the generality of mankind afflicted with sciatica, call it the rheumatism, and that the quack unacquainted with the system, is ignorant of the case, sports with his unwary patient, gulls from him his money, and lastly what is worse, robs him of his life."—*Dr. Seely*.

CHAPTER XXVI.

GOUT. (*Arthritis*.)

DESCRIPTION.

This disease is usually divided into the regular and irregular. When the inflammation occupies the joints to a due degree, and after a certain duration gradually disappears, leaving the health unimpaired, it is termed regular gout. Of the irregular gout there are three species, viz.:

1st, *The Atonic*. When there is not sufficient energy in the system to produce a proper degree of inflammation in the extremities, in consequence of which the general health is considerably affected; the stomach performs the office of digestion imperfectly, and the patient is troubled with flatulency, loss of appetite, eructations, violent pains of a spasmodic nature, and frequently with nausea, accompanied not usually with dejection of spirits and other hypochondrical symptoms.

2. *The retrocedent*. In this, the inflammation having occupied a joint, ceases suddenly, and is translated to some internal part, such as the head, lungs, heart, or stomach.

3. *The misplaced*, or where gout, instead of producing the inflammatory affection of the joint at all, seizes some internal parts, producing inflammation there, and giving rise to some symptoms which attend inflammations of those parts from other causes.

CAUSES.

The attacks of gout are generally in the winter or spring, and are rarely met with before the adult age, or middle period of life. Persons of a full and robust habit are most subject to this disease, particularly those who live luxuriously, and lead an indolent inactive life; whereas those who are employed in constant bodily labour, and who live upon a vegetable diet principally, are seldom afflicted with it. Women are much less the subjects of it than men: no sex, age, or even youth, are, however, exempt from it; but in the latter cases, it can only be ascribed to that predisposition or constitutional bias which is entailed by the parents of the child. An hereditary predisposition therefore, as also too free an indulgence in the use of animal food, fermented liquors, and venery, leading a sedentary and studious life, anxiety of mind, excessive evacuations, fatigue, the application of cold to the extremities, sprains, the ceasing of usual labours or accustomed exercise, indolence, and intemperance, are to be considered as the chief causes which are productive of gout.

The disease may, in general, be readily distinguished from rheumatism, by the pains attacking the smaller joints, instead of the large ones, as in the latter; by its not being accompanied or even preceded at its commencement with symptoms of inflammatory fever; and by the previous affection of the stomach with flatulency, eructations, and pain.

The fit is generally shorter in proportion to the violence of the febrile symptoms and the length of the intermission: its returns may be rendered milder when acquired, than when it proceeds from an hereditary bias, and the disease admits more readily of alleviation in youthful persons than in those that have attained an advanced period of life.

SYMPTOMS.

An attack of regular gout sometimes comes on suddenly, and without any previous warning; but most usually it is preceded by a belching of wind, flatulency in the stomach and bowels, nausea, weariness, dejection of spirits, pains in the limbs, with a sensation as if cold water or wind were passing down the thigh; great lassitude and fatigue are felt after the slightest exercise, the bowels are costive, and the urine is of a pale colour.

The paroxysm most frequently comes on about two o'clock in the morning with excruciating pain either in the joint of the great toe, the heel, calf of the leg, or perhaps the whole of the foot; and this becoming more violent by degrees, is accompanied with shiverings, succeeded by heat and other febrile symptoms. The pain having attained its height towards the following evening, ceases gradually, a gentle moisture breaks out upon the skin, and the patient being greatly relieved from his torment, falls asleep, but upon awakening he finds the parts, before painful, now much inflamed and swollen. During several succeeding evenings there is a return of both pain and fever, and these continue with more or less violence during the night, and towards the break of day they subside and go off.

A fit of the gout consists of several such paroxysms as have been described; and although there may be some little alleviation in the symptoms after a day or two, still the pain and fever return every night, going off again the following morning. According to the disposition of the body to the disease, the strength of the patient, and season of the year, will be the duration of a fit of the gout; but it usually continues at first for two or three weeks, and then goes off either by perspiration, an increased flow of urine, or some other evacuation; the cuticle or scarf-skin of the parts which have been affected, peeling off in branny scales, and some slight lameness and tenderness remaining for a considerable time.

In the atonic gout, if the head be affected, there is great pain there, with perhaps giddiness, and not unfrequently apoplectic and paralytic affections are the consequence. If the lungs, it produces an affection similar to asthma. If the heart, faintings, palpitations, and an intermittent pulse. If it is seated in the stomach, there is great pain, nausea, vomiting, flatulency, and eructations, dejection of mind, languor, want of energy, and apprehension of danger; and these are frequently accompanied with cramps in several parts of the trunk of the body and upper extremities. Sometimes there is obstinate costiveness; sometimes a purging.

In the retrocedent gout, if the disease is translated to the stomach, there is great anxiety, violent pain and vomiting, with a peculiar sense of cold over the region of this organ. If to the heart, there are faintings

and palpitations. If to the lungs, asthma. If to the head, apoplexy and palsy.

In misplaced gout, instead of there being an inflammatory affection of the joints, the disease attacks some internal part, produces inflammation there, and then we meet with the symptoms specified as accompanying such an affection from an exposure to cold, or other causes.

Attacks of gout usually become more severe during each returning fit, both as to the degree of pain as well as the number of parts which are affected. Probably it only seizes one foot at first, but afterwards both feet are affected by every paroxysm, the one after the other; and as the disease advances, it not only affects both feet at once, but after having ceased in the foot which was secondly attacked, again returns to the first, and perhaps a second time into the other. Sometimes it shifts its seat from the feet into the other joints of the upper and lower extremities; and in severe cases there is scarcely a joint of the body that does not in its turn feel its effects. Although two joints may be affected at the same time, yet it generally happens that the attack is only severe in one, passing successively from one to another, so that the sufferings of the patient are frequently prolonged to a considerable length of time.

At first a gouty attack occurs probably only once in two or three years; it then comes on every year, till at length it becomes very frequent, and is not only of longer duration, but much severer each succeeding fit. After repeated attacks, the joints lose their flexibility and strength, and become so stiff as essentially to interfere with their performing their accustomed motions. On the joints of the fingers, little hard swellings or small nodes arise, chalky concretions are formed, and both the kidneys and bladder occasionally become affected with small stones of a similar nature.

PROGNOSIS.

We are to consider an unimpaired constitution, with the tongue becoming moist and clean, the urine depositing a sediment, the appetite returning, and the local inflammation gradually subsiding, and not shewing a disposition to a quick transference from one part to another, or if it be fugitive, not fixing severely on new parts, as favourable occurrences. Whereas, on the contrary, an impaired constitution, or the disease suddenly receding from the extremities and attacking an important organ, as the brain, heart, stomach, &c. are to be viewed in an unfavourable and dangerous light. Where the system is greatly weakened from frequent and long continued fits of the gout, the patient is apt to be attacked with either palsy, asthma, or dropsy in some form or other, but more particularly an extravasation of fluid in the chest.

TREATMENT.

Various medicines have been recommended for the cure of the gout, among the rest a preparation has been highly extolled called the *Eau Medicinale d'Husson*.

This much celebrated composition was discovered about fifty-five years ago by M. Husson, a French officer, and has been so highly famed for its almost infallible powers in the cure of gout, as to command the enormous price of from one to two crowns a dose; and it still retains its high reputation in England, and in various parts of the European con-

tinent. This remedy is considered as producing a specific effect in removing the paroxysms of gout, as often, and almost as soon as they occur; scarcely an instance, it is said, of its failure having yet been known in practice. Numerous attempts have been made to discover the composition, or to devise a substitute for Eau Medicinale.

“Mr. James Moor, surgeon, London, has succeeded in compounding a medicine, closely resembling the original medicine in smell, taste, and dose, in its evacuant powers, and finally in its property of relieving the gout so far as it has been tried. This medicine, whose identity with the specific is thus presumed on, is composed of three parts of the wine of white hellebore, and one of wine of opium. The above wine of white hellebore is prepared by infusing for ten days eight ounces of the sliced root of that plant in two pints and a half of white wine. The dose of the compound is from one to two drachms.”

The root of our own species of swamp hellebore has been found equally efficacious as the imported root.

This composition, says Dr. Thatcher, since its promulgation, has been considerably employed in practice, and with the success anticipated by its sanguine advocates. In gout and rheumatism it has obtained a reputation in some degree proportioned to the original preparation of M. Husson. The dose above specified, however, is too large, as it is apt to irritate and induce nausea and vomiting. It is found more convenient to limit the dose to sixty or eighty drops, or increase as the stomach of the patient can bear; smaller doses twice in a day have on some occasions proved advantageous.

Cold Water.—Cold water has also been highly recommended in gout. The following remarks are taken from the Edinburgh Medical and Surgical Journal.

“As a compiler, however, the abilities of Dr. Barthez are highly respectable. Every where are evinced marks of great research and sound judgment. Let us take as an example, and as connected with Dr. Kinglake’s practice, what he has said of the use of cold water in gout. The use of cold water as a drink, he represents as of acknowledged efficacy in allaying the violent pains of a fit of gout, as well as in moderating the thirst and heat, which are sometimes insupportable. Rondelet seems to have been the first to consider this treatment as of specific utility in this disease. Vander Heyde says, that there is no remedy more powerful in preventing an attack, or curing it after it has commenced. Although our author thinks this eulogium exaggerated, he has himself often experienced the best effects from this remedy, and is of opinion that Vogel has with justice recommended it. However, there are limitations to the use of cold water as a drink in this disease, which have not been sufficiently determined. When the thirst and fever are strong, he thinks it may suddenly check the salutary efforts of nature; which has induced Musgrave to say, too generally, that it is always rash and dangerous.

Hippocrates says, that cold water freely poured upon gouty swellings of the joints, allays the pain, by producing a moderate degree of numbness.

Galen has confirmed this opinion; but, from the principles of this practice not having been determined, it has been too generally condemn-

ed by some, as De Gorter, and recommended by others, as Cocchi. Our author, therefore, endeavors to supply this defect; but we think without success. The following facts are more important: Loubet, in a paroxysm of gout, having his feet affected with erysipelas, was induced by the agony he suffered, to immerse his feet and legs in cold water, until it became temperate. After having dried them, he went to bed and slept soundly. On awaking, he continued to perspire profusely for more than fifteen hours, when he found himself relieved; and next day walked without any pain. Pechlin relates, that he knew a gouty man, who got rid of his pains by rubbing his feet with snow, and afterwards walked on the snow. Musgrave has also observed, that the immersion of the feet in cold water, although very often pernicious in a fit of gout, in several individuals had the effect of speedily removing it.

As a preventive of gout, the external application of cold water has been long recommended. The waters of the Cydnus, which are remarkably cold, are celebrated in Strabo for their good effects in gout and ligamentous swellings of domestic animals. Pliny also quotes a letter of Cassius of Parma to Mark Anthony, on the use of the waters of the Cydnus in gout. Antonius Musa cured Augustus of extreme emaciation, the consequence of gout, by cold bathing and cold drink. Stoll advises the body to be spunged every morning with cold water; Grant says, that walking in cold water is the most useful of all exercises; and Williams recommends immersion for about half a minute in cold water, succeeded by friction and exercise, for the radical cure of gout. "Upon the whole," says our author, "it is impossible to deny the good effects which immersion for a short time in cold water, succeeded by moderate exercise, has in exciting the powers of the constitution in many individuals subject to gout; provided," he cautiously adds, "this immersion be employed in favourable circumstances, and combined with an appropriate strengthening diet."

But in one particular, says an author, Dr. Good is rather singular in his practice; it is in the use of cold water externally applied. He speaks from a trial of several years upon his own person, and is anxious that others should participate in what has proved so decisive a comfort to himself. In the height of a paroxysm of pain he stripped off the flannel and boldly plunged his foot into cold water for four or five times in succession. The application was peculiarly refreshing; the fiery heat and pain, and all the inflammatory symptoms diminished instantly; he repeated the cold bathing two hours afterwards, and continued to do so through the whole of the day; the complaint gradually diminishing upon every repetition, and in twenty-four hours the fit completely disappeared, and he was capable of resuming his accustomed exercise of walking. For five or six years afterwards in his annual attacks, he always had immediate recourse to cold immersion or affusion.

Heat, or hot water, has also been very much praised.

Dr. Steinherm, of Edinburgh, has adopted a method for the cure of gout which is extremely simple; it being nothing more or less than holding the affected part over hot or boiling water. The Doctor states this process was attended with the most sudden and salutary effect in his own person.

The application of the vapour bath, or the steaming mentioned above will have all the benefits of the hot water, with the stimulating properties of the herbs.

In case the toe, foot, hand, or any other part is much swelled or painful, apply a poultice made by simmering *Bran* and *Vinegar* together till a poultice of suitable consistence is formed. Apply tepid.¹

Should this fail to give relief, take equal parts of *Sicuta* and *Stramonium leaves*, simmer in good vinegar until soft, then add a sufficient quantity of *Slippery Elm Bark* pulverized, to form a poultice. Apply blood warm, renew before it becomes dry.

This will be found an excellent application when other appropriate means have been used.

The following means have been advised in the forming stage of the disease, in order to moderate or prevent the paroxysm. Emetics, (Chalmers;) active cathartics, (Musgrave;) vegetable bitters, iron, and high-seasoned food, (Grant;) Dover's powder of antimonial wine with opium, (Fothergill;) large doses of musk or castor, (Williams;) gratiola, Wolff;) bleeding from the foot, (Gilbert;) the application of very cold water to the feet, (Giannini;) the internal use of iced-water, (Barthez;) &c.

The following liniment may be applied to the swelling:

Take Spirits of Turpentine, 1 oz.
Gum Camphor, 1 oz.
Alcohol, 1 quart. Mix.

Apply warm.

Should the pain, swelling, and heat be great, the foot or part affected may be steamed over bitter herbs. This generally affords the most sudden and permanent relief.

If the foregoing treatment does not cure the complaint, the *Botanical Drops* may be given, two tea-spoonfuls four times a day in a tumbler of *Prickly Ash* tea, made either of the bark or berries.

Poultices.—If the parts are very painful, let a poultice be applied made by simmering together *Elm Bark* and *Vinegar*.

A portion of physic should be occasionally taken and a course of alterative medicine as directed under the head of Rheumatism.

REGIMEN.

In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must keep nearly to his usual diet, and should take frequently a glass of wine. Wine-whey is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It is well known, that the whole habit may be so altered by a proper regimen, as quite to eradicate this disease; and those only who have sufficient resolution to persist in such a course have reason to expect a cure.

The course which we would recommend for preventing the gout, is as follows:—In the first place, *universal temperance*. In the next place,

sufficient exercise. By this we do not mean sauntering about in an indolent manner, but labour, sweat, and toil. These only can render the humours wholesome, and keep them so. Going early to bed, and rising betimes, are also of great importance. It is likewise proper to avoid night studies, and intense thinking. The supper should be light and taken early. The use of milk, gradually increased, till it becomes the principal part of diet, is particularly recommended. All strong liquors, especially generous wines and sour punch, are to be avoided.

CLASS III.

ERUPTIVE DISEASES.

CHARACTER.

MOST of this class of diseases is characterized by fever, nausea or vomiting, and at a particular time, numerous and small eruptions appear on the skin or surface of the body. Most also of the diseases of this class are contagious, and attack a person only once in life.

All the symptoms exhibited show conclusively that the pathology of fever as advocated in this work, is strictly correct. While the contagious matter is in the circulation, all the phenomena of fever is observed; but as soon as the eruptions, the excitive cause, are thrown to the surface, it subsides, and re-appears when such humors or eruptions are absorbed, showing in the plainest possible manner the nature and cause of Fever.

CHAPTER I.SMALL-POX, (*Variola.*)

DESCRIPTION.

SMALL-POX is a disease of a very contagious nature, marked by a fever which is usually inflammatory, but now and then is of a typhoid nature, attended with vomiting, and upon pressure of the epigastrium, with pain; succeeded after a few days by an eruption of red pimples on different parts of the body, which in the course of time suppurate, and scab, which at length fall off, leaving frequently behind them little pits in the skin, and, in severe cases, scars.

"It is not known," says Eberle, "at what period the small-pox made its first appearance. In the writings of the Greek and Roman physicians, we find nothing which could lead us to believe that they had any particular knowledge of this devastating malady, although we can scarcely doubt that its origin was of a much earlier date. The Arabian physicians were the first who gave a distinct description of this disease; and

it is to the small work of Rhazes, who lived about the beginning of the tenth century, that we must look for an account of its early history. It may be collected from the writings of Rhazes and others, that small-pox was probably at first brought from Ethiopia into Arabia, and that it was thence conveyed into the Lovant, Spain, and Sicily by the Saracens during their hostile irruptions into these countries. In the eleventh and twelfth centuries, it gained vast ground during the wars waged by the Christian potentates against the infidel Saracens for the recovery of the holy land. From that time forwards, its desolating visitations were frequently renewed in every part of Europe, and there is perhaps no single disease, with which the Almighty has thought it good to afflict mankind, which has carried off so many victims to the grave as the present one."

It has been estimated, that before the introduction of vaccination, 450,000 individuals died annually of small-pox in Europe.

CAUSES.

Both the distinct and confluent small-pox are produced either by breathing air impregnated with the effluvia arising from the bodies of those who labour under the disease, or by the introduction of a small quantity of variolous matter into the habit by inoculation; and it is probable that the variety of the small-pox is not owing to any difference in the contagion, but depends on the state of the person to whom it is applied, or on certain circumstances concurring with the application of it.

Many physicians are of opinion, that the variolous contagion is limited to a narrow sphere, and that it seldom, if ever, is conveyed by the wind to a distance, as some have imagined it capable of being. Dr. Haygarth, in his "Sketch of a Plan to exterminate the casual Small-pox," informs us, that certain facts appear to exhibit *negative* proofs that the open air is not contaminated to a great distance from the patient; not to one thousand five hundred feet, nor probably to one hundredth part of the space. He mentions, that very few cases have been adduced by those who have corresponded with him on the subject, in which clothes exposed to variolous miasma have been even suspected of conveying infection, and that several have given a negative testimony against this mode of communication. He further notices, that innumerable instances are to be produced where medical men, after exposing themselves to the miasms of an infectious chamber, in a very short time nearly approach persons liable to the distemper, who are yet not infected by the interview; and that inoculators are daily in this situation without communicating the casual small-pox. The period during which infection remains latent in the body, he observes, is determined by the testimony of many to be, in the inoculated small-pox, from the fifth day to the sixteenth, seventeenth, and even the twenty-third; in the casual or natural small-pox, a little but not much longer than the common period in inoculation.

A variety of opinions have been entertained respecting the effect of the variolous infection on the foetus in utero; a sufficient number of instances, however, have been recorded, to ascertain that the disease may be communicated from the mother to the child. In some cases the body of the child at its birth has been covered with pustules, and the nature of

the disease has been most satisfactorily ascertained by inoculating with matter taken from these pustules. In other cases there has been no appearance of the disease at the time of the birth, but an eruption and other symptoms of the disease have appeared so early, as to ascertain that the infection must have been received previously to the removal of the child from the uterus.

SYMPTOMS.

Of this disease there are two species, the *distinct*, and *confluent*. In the *distinct small-pox*, the disease begins with an inflammatory fever. It generally comes on with some symptoms of a cold stage, and commonly with a considerable languor and drowsiness. A hot stage is soon formed, and becomes more considerable on the second and third day. During this course, children are liable to frequent startings from their slumbers; and adults, if they are kept in bed, are disposed to much sweating. On the third day, children are sometimes affected with one or two epileptic fits. Towards the end of the third day the eruption commonly appears, and gradually increases during the fourth; appearing first on the face, and successively on the inferior parts, so as to be completed over the whole body on the fifth day. From the third day, the fever abates, and by the fifth it entirely ceases.

The eruption appears at first in small red spots, hardly prominent; but by degrees rising into pimples. There are generally but few on the face; but even when more numerous they are separate and distinct from one another. On the fifth or sixth day a small vesicle, or bladder, containing an almost colourless fluid, appears on the top of each pimple: for two days these vesicles increase in breadth only, and there is a small pit in their middle, so that they are not raised into spheroidal or globular pustules or eruptions, till the eighth day. These pustules, from their first formation, continue to be surrounded with a circular inflamed margin, which, when they are numerous, diffuses some inflammation over the neighbouring skin, so as to give somewhat of a damask-rose colour to the spaces between the pustules.

As the pustules increase in size, the face swells considerably, if they are numerous on it; and the eye-lids particularly are so much swelled, that the eyes are entirely shut. As the disease proceeds, the matter in the pustules becomes by degrees, first more opaque or cloudy, then white, and at length assumes a yellowish colour. On the eleventh day the swelling of the face is abated, and the pustules seem quite full. On the top of each a darker spot appears; and at this place the pustule, on the eleventh day or soon after, is spontaneously broken, and a portion of the matter oozes out, in consequence of which the pustule is shrivelled, and subsides; while the matter oozing out dries, and forms a crust upon its surface. Sometimes only a little of the matter issues out, and what remains in the pustules becomes thick and even hard. After some days, both the crusts and the hardened pustules fall off, leaving the skin which they covered of a brownish red colour; nor doth it resume its natural colour till many days after. In some cases, where the matter of the pustules has been more liquid, the crusts formed by it are later in falling off.

On the legs and hands the matter is frequently absorbed; so that at the height of the disease, these pustules appear empty. On the tenth and eleventh days, as the swelling of the face subsides, a swelling arises in the hands and feet; but which again subsides as the pustules come to maturity. When the pustules are numerous on the face upon the sixth or seventh day, some uneasiness in the throat, with a hoarseness in the voice, comes on, and a thin liquid is poured out from the mouth. These symptoms increase with the swelling of the face; and the liquids of the mouth and throat becoming thicker, are with difficulty thrown out; and there is, at the same time, some difficulty in swallowing, so that liquids taken in to be swallowed are frequently rejected or thrown out by the nose. But all these affections are abated as the swelling of the face subsides.

The more exactly the disease retains the form of the distinct kind, it is the safer; and the more completely the disease takes the form of the confluent kind, it is the more dangerous. It is only when the distinct kind shows a great number of pustules on the face, or otherwise, by fever or putrescency, approaching to the circumstances of the confluent, that the distinct kind is attended with any danger.

There is not much danger in the mild distinct small-pox, except when the patient is extremely loaded, especially about the head and throat. This disease sometimes lays the foundation of consumption, and obstinate opthamly, or inflammation of the eyes, and frequently, by removing complaints that existed before, it improves the health and constitution.

Confluent Species.—In the *confluent* small-pox all the symptoms above mentioned are much more severe. The eruptive fever particularly is more violent, the pulse is more frequent and more contracted. The coma, or drowsiness, is more considerable, and there is frequently a delirium. Vomiting also generally attends, especially at the beginning of the disease. In very young infants, epileptic fits are sometimes frequent on the first days of the disease, and sometimes prove fatal before any eruption appears; or they usher in a very confluent and putrid small pox. The eruption appears more early on the third day, and sometimes in clusters like the measles.

When the eruption is completed, the pimples are always more numerous upon the face, and at the same time smaller and less prominent. Upon the eruption the fever suffers some remission, but never goes off entirely; and after the fifth or sixth day it increases again, and continues to be considerable throughout the remainder of the disease. The vesicles formed on the top of the pimples appear sooner; and, while they increase in breadth, they do not retain a circular, but are every way of an irregular figure. Many of them run into one another, inso-much that very often the face is covered with one vesicle rather than with a number of pustules or eruptions.

The vesicles, as far as they are any way separated, do not arise to a spheroidal or globular form, but remain flat, and sometimes the whole of the face is of an even surface. When the pustules are in any degree separated, they are not bounded by an inflamed margin, but the part of the skin that is free from pustules is generally pale and flaccid. The

liquor in the pustules changes from a clear to an opaque or cloudy appearance, and becomes whitish and brownish, but never acquires the yellow colour, and thick consistence which appears in the distinct small-pox. The swelling of the face, which only sometimes attends the distinct, always attends the confluent kind: It also comes on more early, and arises to a greater height, but abates considerably on the tenth or eleventh day. At this time the pustules or vesicles break and shrivel; pouring out, at the same time, a liquor, which is formed into brown or black crusts, which do not fall off for a long time after. Those of the face, in falling off, leave the skin subject to a desquamation or scaling, which generally produces pittings.

On the other parts of the body, the pustules of the confluent small-pox are more distinct than on the face; but never acquire the same maturity and consistence of pus, or matter, as in the distinct kind. The salivation, which only sometimes attends the distinct small-pox, very constantly attends the confluent. In infants a diarrhoea comes frequently instead of a salivation.

In this kind of small-pox, there is often a very considerable putrescency of the fluids, as appears from petechiæ, serous, or watery vesicles, under which the skin shows a disposition to gangrene, or mortification, and form bloody urine, or other hæmorrhages; all which symptoms frequently attend this disease. In the confluent small pox also, the fever, which had only suffered a remission from the eruption to the maturation, at or immediately after this period, is frequently renewed again with considerable violence. This is what has been called the *secondary fever*, and is of various duration and event.

In the confluent kind the danger is always very considerable: and the more violent and permanent the fever is, the greater the danger; and especially in proportion to the increase of the symptoms of putrescency. When the putrid disposition is very great, the disease sometimes proves fatal before the eighth day; but, in most cases, death happens on the eleventh, and sometimes not till the fourteenth or seventeenth day. Though the small-pox may not prove immediately fatal, the more violent kinds are often followed by a morbid state of the body, sometimes of very dangerous event.

Dr. Buchan is of opinion, that, "the pustules, as soon as they come to maturity, should be opened." But Dr. Sims, in his observations on epidemical diseases, says, "allow me to remark on the practice of those, who recommend the pustules in the face to be opened, when at the height, that the contained matter being thereby evacuated, the face may not retain any disagreeable marks. In a favourable distinct pock, this caution seems superfluous, there being little danger of its leaving any deep impression; and in the confluent malignant kind, when I have seen it practised, it has always given such intolerable smart, as must wound any person not deprived of humanity itself."

PROGNOSIS:

The distinct small-pox is not attended with danger, except when the eruptive fever is very violent, or when it attacks pregnant women, or approaches nearly in its nature to that of the confluent; but this last is

always accompanied with considerable risk, the degree of which is ever in proportion to the violence and permanence of the fever, the number of pustules on the face, and the disposition to putrescency which prevails.

When there is a great tendency this way, the disease usually proves fatal between the eighth and eleventh day; but in some cases death is protracted till the fourteenth or sixteenth. The confluent small-pox, although it may not prove immediately mortal, is very apt to induce various morbid affections.

Both kinds of small-pox leave behind them a predisposition to inflammatory complaints, particularly to ophthalmia and pneumonia; and they not unfrequently excite scrofula into action, which might otherwise have lain dormant in the system.

The regular swelling of the hands and feet, upon that of the face subsiding, and its continuance for the due time, may be regarded in a favourable light. Violent eruptive fever, delirium, stupor, severe vomiting, dyspnœa, sudden disappearance of the eruption, subsidence of the swelling of the face or extremities, suppression of saliva, or depression of the pustules, followed by much prostration of strength, pallor of the skin, great anxiety, syncope, or convulsions, are appearances which denote the greatest danger. The disease in its progress assuming a malignant character and typhoid type, and the pustules becoming livid, or being interspersed with petechiæ, portend a fatal termination.

DISSECTION.

The dissections which have been made of confluent small-pox, have never discovered any pustules internally on the viscera. From them it also appears that various pustules never attack the cavities of the body, except those to which the air has free access, as the nose, mouth, trachea, the larger branches of the bronchia, and the outermost part of the meatus auditorius. In cases of prolapsus ani, they likewise frequently attack that part of the gut which is exposed to the air. They have usually shown the same morbid appearances inwardly, as are met with in putrid fever, where the disease has been of the malignant kind. Where the febrile symptoms have run high, and the head has been much affected with coma or delirium, the vessels of the brain appear, on removing the cranium and dura mater, more turgid, and filled with a darker coloured blood than usual, and a greater quantity of serous fluid is found, particularly towards the base of the brain. Under similar circumstances the lungs have often a darker appearance, and their moisture is more copious than usual. When no inflammatory affection has supervened, they are most usually sound.

COMMON TREATMENT.

Bleeding, mercury, salts, antimony, nitre, blisters, pounded ice to the head, lunar caustic to the eruptions, &c.

REFORMED PRACTICE.

Indications of Cure.—The object of the physician in this disease, as in every other ought to be, to aid the salutary efforts of nature in eliminating or expelling the morbid or variolous poison, is,

1. If the powers of nature are insufficient to expel it, such medicine must be given as will produce this effect.
2. If on the other hand, there is too great an excitement in the system, or too much fever, it must be moderated.
3. Counteract a tendency to putrescency.

When called in the commencement of small-pox, it will be found necessary to treat it in a considerable degree on general principles, having in view at the same time, particular symptoms, such as vomiting. For such is the similarity between *eruptive* and *febrile* diseases, that it is sometimes difficult to discriminate between them, and if the diagnostic symptoms are ever so well marked, a very similar course of treatment is called for in both complaints. Should vomiting be predominant, such medicine must be given as will allay the irritability of the stomach; and the best for this, will be the *bi-carbonate of potash*, or *sal æratus*, given as has previously been directed, to be accompanied with an infusion or tea of *spearmint*. When this is allayed, administer a *purgative*. After the stomach and bowels have been cleansed, attention must be directed to the skin. Such medicine must be given as will produce gentle, not profuse perspiration. This must be kept up moderately throughout the whole course of the disease.

The following infusion may be given :

Take of Saffron,
Catnip. Equal parts.

Make a tea and give it warm. This will soon produce a moisture of the skin, and assist nature to expel the eruptions.

It will be indispensably necessary to immerse the feet in warm *ley water*, to be repeated once or twice daily.

The surface must be entirely bathed with the same liquid, and repeated as often.

Should the reaction or febrile excitement be too great, it must be moderated by attention to all the secretions, and excretions. Purgatives and sudorifics are the principal class of medicines to fulfil this indication. Should the heat be great, let the body be bathed with warm water, notwithstanding the eruptions. Attention must be paid to particular symptoms, such as pains in the head, delirium, sore throat, &c. For pain in the head, in addition to bathing the feet which alone is often sufficient to remove it, let a *mustard poultice* or *plaster* be applied to the bottom of the feet. The head may likewise be bathed with equal parts of *rain water*, *spirits* and *vinegar*, and applied tepid.

For soreness of the throat, and accumulation of mucus and phlegm in the bronchial vessels, give one or two tea-spoonfuls of the *tincture of lobelia*, to be repeated occasionally. The throat may also be gargled with a decoction of equal parts of *sage* and *hyssop*, *sweetened with honey*, and a little *borax* added.

When there is a great tendency to putrescency in the fluids, give a wine glass of *yeast* three or four times a day.

Sometimes there is a sinking or great prostration of strength. When this is the case, *wine- whey* may be given, and *buttermilk* moderately acid.

During the complaint there is great restlessness, or pain, want of sleep, &c. For such symptoms, as well as to keep up a determination to the surface, without increasing the heat of the body, give ten grains of the *Diaphoretic Powders*, and particularly at bed time; at the same time a weak infusion of the *Virginia Snake Root* may be given.

In consequence of debility, it is sometimes the case, that the vesicles or eruptions, are flabby or not well filled, showing evidently that the variolous matter is retained in the system. Under such circumstances, a more stimulating course of treatment must be pursued.

A tea-spoonful of the sweating drops must be given in a half pint of *Catnip Tea*, and after giving this, should not the pox become fuller, and more healthy, give milk punch, to be continued until an improvement is perceptible.

When the eruptions suddenly subside, or as it is familiarly expressed, *strike in*, or in other words, when there is a recession of them, before they have arrived at maturity, the danger is very great. Should such symptoms occur, the same treatment, as last mentioned, must be promptly and rigidly pursued; in addition to which, a tea made of equal parts of *Saffron* and *Snake Root*, may be freely given.

The most dangerous period of the small-pox, is when a *secondary fever* appears, which generally commences when the disease begins to blacken or turn. Most of those who fall victims to the small-pox, are carried off by this fever, and all, it appears to me, for the want of proper treatment.

Nature often attempts at the turn of the small-pox to relieve the patient by diarrhœa, and did physicians take this hint, they would know what to prescribe. We learn from this fact that the secondary fever arises from the absorption of the variolous matter, and that there would be little or none, were nature properly aided in her attempts to carry off the complaint. Therefore her kind endeavours must be promoted. When the eruptions are thrown to the surface, and the disease begins to turn, the patient must be freely *purged*; whereas, previous to this period a *cathartic*, occasionally administered, is sufficient.

Our *common physic* is the best preparation that can be given to all classes.

Sometimes infants are affected with convulsions before the eruptions appear.

There is no occasion for alarm in this case. All that is necessary to be done, is to *bathe the feet in warm water*, and give warm diluent drinks, such as *Balm*, *Mint*, or *Catnip Tea*, &c.

This treatment is designed for both the *distinct* and *confluent* species. The only difference in the treatment is, that in the latter, a more active course of treatment is called for.

REGIMEN.

During the eruptive fever, the patient must be kept cool and easy, and weak diluting liquors given, such as *Mint*, *Balm*, and *Catnip Tea*, and if the patient is very thirsty, and the eruption well out, give also *lemonade*, *currant jelly*, and *toast water*.

His nourishment should be *barley water*, *Indian meal gruel*, *butter-milk* and *water*, *roasted apples*, *ripe fruit*, and particularly *mush* or

hasty pudding. There should be a current of air in the room, but should not be suffered to come in direct contact with the patient. The temperature of the room should be uniform, neither too hot, nor too cold. Great attention should be paid to cleanliness. As soon as any thing passes the bowels, it should be immediately removed, and vinegar thrown upon a heated brick or other substances. The linen and clothes should be often changed, and all noise and confusion, as far as possible, prevented.

Various means have been recommended to prevent the pitting which attends the small-pox; such as opening the pustules, and the application of lunar caustic; but it is very questionable whether any benefit arises from this practice or any other of a similar nature.

Nothing is better to diminish the inflammation and pitting of the face, as well as to mitigate the inflammation of the eyes, than a poultice made of the superfine flour of the *Slippery Elm*. The eruptions, if very large and full of matter, attended with great irritation, may be punctured, the fluid let out, and sprinkled with the dry flour of *Slippery Elm*.

The above treatment, I have found invariably successful in small-pox; never having lost a single case where I have been called in any reasonable time. It carries the patient safely and shortly, through the worst species of the disease, while the course pursued by physicians generally, such as bleeding, mercury, and cold applications, is attended with the most distressing or fatal effects.

I have extracted most of the following remarks on the treatment of this disease, from several English writers.

When the first symptoms of the small-pox appear, people are alarmed, and generally have recourse to medicine, to the great danger of the life of the patient; and if convulsions appear, the alarm is still greater, as if they announced a primary disease; instead of being a symptom, and not an unfavourable one, of the approaching eruption; as the fits usually go off before the actual appearance of the small-pox. Slight convulsions are supposed a favourable symptom, as it has been observed they prognosticate the distinct sorts, and never precede the confluent.

During the eruptive fever, the patient should be kept cool and easy, and allowed to drink freely of some weak diluting liquors; as barley-water, balm-tea, clear whey, gruels, &c. Instead of being wholly confined to his bed, he should sit up as much as he is able, and have his feet and legs often bathed in luke-warm water.

To confine the patient too soon to his bed at this period, and supply him with abundance of warm cordials, or other heating medicines, is doubtless very pernicious. Whatever heats and inflames the blood increases the fever, and prematurely forces the pustules; which not only increases the number of pustules, but also tends to make them run into one another; such as have been pushed out with too great violence, generally falling in before they come to maturity.

A filthy custom prevails among the inferior classes of people, of allowing children in the small-pox to wear the same linen during the whole period of that loathsome disease. This is perhaps done to prevent their

catching cold, but it is attended by many ill consequences: the linen, by the moisture which it absorbs, becomes hard, and frets the tender skin. It also occasions an offensive smell, which is pernicious to the patient, as well as to those about him.

Suffering several children, who have the small-pox, to lie in the same bed, has many ill consequences; they should never be even in the same chamber, as the perspiration, the heat, the smell, &c. all tend to augment the fever, and heighten the distress.

The food, in the small-pox, should be very light, and of a cooling nature, as panado, or bread boiled with milk and water, apples roasted, or boiled with milk, or the like. The drink may be a mixture of equal quantities of milk and water, clear sweet whey, barley-water, thin gruel, &c. Buttermilk is of an opening and cleansing nature, and therefore a very proper drink after the pox are full. Mush, or hasty pudding, and molasses or milk.

Little more is necessary, during the primary fever, than to keep the patient quiet, encouraging him to drink diluting liquors, and bathe his feet frequently in warm water. This is the safest course that can be taken with infants, but for adults of a strong constitution and plethoric habit, a full pulse, a dry skin, and other symptoms of inflammation depletion is necessary; but when these symptoms are not urgent, it may be safer to let it alone. If the body is bound, emollient clysters should be thrown in.

If a great nausea or inclination to vomit comes on, weak *Chamomile* or *Mint Tea*, or warm water should be drank, in order to cleanse the stomach. At the commencement of a fever, nature generally attempts a discharge, either upwards or downwards, which, when gently promoted, greatly abates the violence of the disease. After the pustules have made their appearance, the suppuration must be promoted by diluting drink, and light food, and, if nature seems to flag, by generous cordials; good wine made into a negus, with about an equal quantity of water, and sharpened with orange-juice, currant-jelly, &c. is extremely proper. Wine-whey, sharpened as above, is equally salutary in this case; but if the patient should be overheated by any of these things, the eruption would be retarded instead of being promoted.

When the rising of the small pox is prevented, as it often is, by the violence of the fever, a stimulating regimen should strictly be observed. When excessive restlessness prevents the rising and filling of the small-pox, gentle *anodynes* are necessary; but they ought always to be administered sparingly; a tea-spoonful of the syrup of poppies may be given to an infant every five or six hours, till it has produced the effect desired. A table-spoonful to an adult will be about enough.

When the mouth is foul, and the tongue dry and chapped, it should be often washed, and the throat gargled with water and honey, acidulated with vinegar or currant-jelly. Pernicious consequences ensue from costiveness. Hence the use of purgative medicines; but not a particle of mercury should be given.

When purple, black, or livid spots appear among the small-pox, yeast must be immediately administered in as large doses as the patient's stomach can bear. Also, yeast and castor oil mixed and sweetened with molasses. If for a child, two drams of the bark in powder may be

mixed in three ounces of common water, one ounce of simple cinnamon-water, and two ounces of the syrup of orange or lemon, and a table-spoonful administered every hour. An adult may take at least three or four spoonfuls every hour, in the same form. As this is an important medicine in these cases, it must be administered as frequently as the stomach can bear it. Many happy effects are produced by the use of this medicine; it frequently occasions the petetiae or purple spots to disappear, and the small-pox, which had before a very threatening aspect, to rise and fill with healthy matter.

In this case also the patient's drink should be generous, as wine sharpened with the lemon-juice, vinegar, currant-jelly, &c. Apples, roasted or boiled, preserved cherries, plums, and other acid fruits should be his principal food.

In the lymphatic or chrystalline small-pox, where the matter is thin; and not duly prepared, the bark and acids are also necessary. The *Peruvian Bark* seems to possess a singular power of assisting nature, in preparing matter; and consequently must be very beneficial in this, and other diseases, where the crisis depends on a suppuration. It often happens that, where the small-pox were flat, containing in them transparent matter, and where they had at first the appearance of running into one another, that the *Peruvian Bark*, sharpened as above, changes the colour and consistence of the matter, and produces the most happy effects.

When the eruptions suddenly subside, or as it is familiarly expressed, *strike in*, before they have arrived at maturity, the danger is very great. In this case gentle sweating medicines must be administered. A mixture of *Hoarhound* and *Saffron Tea*, and the patient's spirits supported with cordials. Sharp cataplasms, or poultices applied to the feet and hands, tend to promote the swelling of these parts, and draw the humours towards the extremities.

Nature often attempts, at the turn of the small-pox, to relieve the patient by a lax state of the body. When this happens to be the case, her kind endeavours should be promoted, and the patient should, at the same time, be supported by food and drink of a nourishing and cordial nature.

If, when the secondary fever approaches, the pulse is very quick, hard, and strong, the heat intense, and the breathing laborious, with other symptoms of an inflammation of the breast, the patient must be sweated and purged. If, in the secondary fever, the patient be faint, the pustules become suddenly pale, and there be great coldness of the extremities, *sinapisms* to the feet must be applied, and the patient must be supported with generous cordials. In such cases wine, and milk punch have been given with great success.

It is generally found necessary, after the cure of the small-pox, to purge the patient; but if, during the course of the disease, the body has been kept open, or if buttermilk, and other opening drinks have been taken freely after the height of the small-pox, purging becomes less necessary, though it should not wholly be omitted.

For infants, or very young children, an infusion of senna and prunes, with a little rhubarb, and sweetened with coarse sugar, may be given in small quantities till it operates. A child of the age of five or six years

may take eight or ten grains of fine rhubarb in powder over night. This may be wrought off with water-gruel, and repeated three or four times, allowing five or six days to intervene between each dose. For older children, and adults, the dose should be increased in proportion to the age and constitution.

Parents often deceive themselves, with a confidence that their children are exempt from danger of infection, because they have been in the same room, or even in the same bed, with those who have had the small-pox upon them. But lest too great a reliance should be placed on this circumstance, and should prevent the adoption of necessary measures, it should be generally known that children, *in early infancy*, are not so liable to receive this disease as is commonly imagined; and that a child, who has been exposed to the influence of this disease without receiving it, or who has even been inoculated without effect, may in a little time become highly susceptible of infection.

INOCULATION.

THE small pox, says Townsend, so destructive to preceding generations, is now, under proper management, no more to be dreaded than fire on the hearth.

For this change we are indebted to inoculation, introduced at the commencement of the present century by Pylarini, an eminent practitioner of Italy, who being then resident at Constantinople, sent to the Royal Society the first account both of the operation and its effects on the inhabitants of that metropolis.

By his relation it appears, that to them originally the practice had been derived from Greece, where it was found not in the hands of physicians, but of the peasants.

And by a subsequent account, transmitted to the same society by Timoni, A. D. 1713, it is evident, that the Circassians and Georgians had been long in the habit of performing this kind of office for their female children, in order to preserve their beauty. Their principal intention was, however, to increase their value, when, at the age of maturity, they were to be sold to the Turkish officers.

A. D. 1717, the son of Wortley Montague, then at Constantinople, was inoculated, and lady Mary, on her return to England, introduced the practice, where it was first tried on the malefactors then in Newgate under sentence of death.

In consequence of the propitious issue of that essay, it was adopted by the royal family.

Dr. Jurin, physician to the court, having observed, so early as the year 1722, that, instead of one in five, the usual proportion lost by the natural small-pox, not more than one in ninety failed under inoculation;

he communicated the information to the public, gave a description of his practice, and firmly established it.

When the matter of small-pox is inserted under the skin, a pimple appears on the third day, followed by swelling in the axilla. The pimple then becomes surrounded by a jagged areola, in which small vesications are observable. On the seventh or at farthest the eighth day from the insertion of the virus, rigours occur, and in forty-eight hours afterwards the eruption appears. In a large majority of cases, the eruption proves to be of the *mild* and *distinct* sort; and in very many instances the number of pustules over the whole body does not exceed one hundred. The further progress of the disorder differs in no respect from that of the distinct *casual* small-pox as already described.

Nothing has ever been suggested, calculated to throw the smallest light on the curious fact, that the mode of reception into the system should thus influence the *quantity* of eruption. To so great a degree does this take place, that the mortality by inoculated small-pox, without any restriction as to age or strength of constitution, does not exceed one in five hundred. We select for the period of inoculation that season of the year, and that time of life, when inflammatory tendencies are least to be expected. It is sufficiently ascertained that beyond a few doses of a cooling aperient, no preparatory course of *medicine* is requisite. A spare vegetable diet, cool air, and subacid drinks, will contribute to render the disease mild and safe. Improper management may of course increase the quantity of eruption, and with it the danger of the patient. Some attention, therefore, ought always to be paid to the treatment of inoculated small-pox; but the principles already laid down are equally applicable in the present case, and will be sufficient without further detail for the guidance of the practitioner.

CHAPTER II.

COW-POX; OR, VACCINE DISEASE. (*Vaccina*.)

It is about twenty-five or thirty years since a treatise on this disease from the pen of Dr. Jenner was laid before the public, making it known therein, it had been discovered that those who had been infected by it, were, in general, secured ever afterwards from the infection of the small-pox; that it was a very mild disease in comparison with the latter, never having been found to prove fatal; and, moreover, that from its not being infectious but by inoculation alone, it might be introduced into a family without extending to others.

In many of the dairy countries, it had long ago indeed been observed, that cows were subject to an eruption on their tits and udders, which occasionally was communicated to the fingers and other parts of the hands, of those who milked them, giving rise to a few ulcerations, accompanied by some degree of fever; and it had been noticed that those

who had thus gone through the vaccine disease were not afterwards ever attacked by the small-pox, either naturally or by inoculation. This knowledge had, however, never been improved, or acted upon, until Dr. Jenner's publication; and it is to him that mankind are indebted for the promulgation of this valuable discovery.

The pustules on their first appearance, when the infection is received from the cow, somewhat resemble small vesications occasioned by a burn; these superficial suppurations assume a circular form, their edges being more elevated than the centre, and are of a blueish colour; tumours, in consequence of the absorption of the morbid poison, appear in the arm-pits, with some affection of the system, such as slight shiverings, lassitude, a quick pulse, sickness at the stomach, vomiting, and occasionally delirium. These symptoms, however, generally go off in a few days, leaving the ulcers in a state unfriendly to healing.

It is now well ascertained, however, that the vaccine virus is rendered much milder by passing through different persons, than when received immediately from the cow; and so gentle is the disease when it arises from inoculation, that the aid of medicine is seldom, if ever, necessary, either prior to the appearance of the pustules, or during their continuance or suppurative stage; but as soon as the eschar on the arm where the vaccine matter was introduced, begins to become dry, and the few pustules which had shown themselves to disappear, it may be advisable to give one or two doses of some gentle purgative, suffering three or four days to intervene between each dose.

The following circumstances are deserving of attention in inoculating for the cow-pox, and substituting this mild and safe disease for that dangerous and pestilential one, the small-pox.

1. That the matter with which we inoculate, be not taken later in the disease than the ninth day.
2. That the fluid be perfectly transparent, as it is not to be depended upon when it is in any degree become opaque.
3. That the matter taken should be allowed to dry gradually and thoroughly before it is laid by for use, when not employed immediately, or in its fluid state.
4. That the punctures with the besmeared lancet be done as superficially as possible, and only one be made in the same arm.

Here it may not be improper to remark, that the inoculation for this disease will not be likely to succeed well if there be any herpetic eruption on the skin. On the third or fourth day after inoculation, the wound will appear a little prominent round its edges and red, which will keep increasing to about the ninth or tenth day, when the constitution will show some symptoms of being affected, such as a slight degree of febrile heat, and probably a little enlargement of the glands in the pit of the inoculated arm.

Should any excess of inflammation happen to arise in the inoculated part, immediate attention should be paid to it.

It will be of the highest importance after vaccine inoculation, to ascertain fully that the vesicle in the arm has not acted *locally*, but that it has effected the desired change in the constitution. With this view, it may be advisable to re-vaccinate at some after period, to test the se-

curity from any exposure hereafter to variolous infection. If parents will not be satisfied with this test, matter taken from a small-pox pustule may then be substituted instead of the vaccine. In one instance out of ten thousand, perhaps, small-pox may take place after the constitution has been satisfactorily acted upon by vaccine inoculation, and even when this has happened, the disease has usually been very mild indeed.

Some persons have been known to have the small-pox a second time, and this irregularity may perhaps account for a few of the cases of small-pox which have occurred after vaccine inoculation. The majority of such cases may, however, justly be attributed to imperfect or improper vaccine matter having been employed for the inoculation, and which had not the power of securing the person so inoculated from the contagion of the small-pox. This spurious sort of vaccine matter is wholly inefficacious.

We have only to take a comparative view of the effects of the inoculated cow-pox, the natural small-pox, and the inoculated small-pox to be fully satisfied of the decided preference to which the former is entitled.

The inoculated cow-pox, uniformly, is a mild and inoffensive disease; it is neither loathsome nor attended with any danger; in general, it forms no eruption, except a pustule or two on the inoculated part; requires neither confinement, loss of time, nor expense, as few or no medicines are necessary; it occasions no subsequent disfiguration; induces no supervenient disease; and lastly, is not contagious, and may therefore be introduced into any family, without its extending to others.

It is well known that the natural small-pox is frequently a painful, loathsome, and fatal disease; and that from a computation, one person in six falls a martyr to it. It is of a highly contagious nature, and spreads rapidly; the eruptions are painful, numerous, and disgusting in their appearance, and leave behind deep scars, or pits, especially in the face; it requires some weeks confinement, loss of time, and more or less expense, as medical treatment and attendance are requisite both during the continuance of the disease and afterwards; and when it ceases, it is apt to induce inflammation of the eyes, deafness, diseases of the skin, glands, and joints, and to bring into action scrofula, which is dormant in the constitution.

The inoculated small-pox is generally mild, but in some instances is attended with all the violence, disgusting appearances, and danger of the natural. Of those who are inoculated, it has been computed that one out of three hundred is destroyed, and that one in forty has the disease in a dangerous form. Eruptions more or less numerous are scattered over the body, and the disease requires preparation by diet and medicine before the appearance of the eruptions, as well as confinement, loss of time and expense during its different stages. It is, moreover, as contagious as the natural small-pox, and where it proves severe, is apt to leave deep pits or scars behind it, as well as to call into action other diseases, particularly scrofula. Besides these disadvantages, it cannot be practised with safety in early infancy, or old age, nor during

a state of pregnancy ; whereas, vaccine inoculation is subject to no such restrictions and inconveniences.—[*Thomas.*]

In many instances, as has been already stated, vaccination protects the system *completely* against infection from small-pox contagion. In other cases, the system is either only partially freed from its aptitude to variolous infection, or this susceptibility, though for a time entirely subdued by the vaccine influence, gradually returns and regains a greater or less degree of intensity. The disease which results from the action of small-pox contagion on a system thus partially deprived of its variolous susceptibility, and which has of late years been so common, deviates more or less conspicuously from regular small-pox, and is, in a great measure, divested of the dangerous character of the latter affection.

CHAPTER III.

OF THE CHICKEN AND SWINE-POX.

DESCRIPTION.

THESE diseases are the same, and differ only in name.

SYMPTOMS.

The eruptions make their appearance, in many instances, without any previous illness ; in others, they are preceded by a slight degree of chilliness, lassitude, cough, interrupted sleep, wandering pains, loss of appetite, and a febrile disposition for three or four days. Most of the eruptions are of the common size of those of the small-pox, but they are not numerous or confluent. On the first day they are red, and much resemble, in their appearance, the small-pox. On the second day, the red pimples have become small vesicles, containing a colourless fluid, but sometimes a yellowish liquor. On the third, the pustules arrive at full maturity, and in some instances so much resemble the small-pox as to be distinguished with difficulty. When the little bladder is broken by accident or rubbing, as sometimes happens on the first or second day, there forms a thin scab, and the swelling of the other part abates without its ever being converted into proper matter, as it is in the small-pox. The few which escape being burst, have the little drop of fluid contained in the vesicle at the top of them, turn yellow and thick, and it dries into a scab. On the fifth day of the eruption, the pustules are almost dried and covered with a slight crust, but no cicatrix, or mark, is left behind when this falls off.

DIAGNOSIS.

The only disease for which the one under consideration can be mistaken, is the small-pox of the mildest and most distinct kind ; but the

former may readily be distinguished from the latter, by the small degree of fever, by the eruption being generally first visible in the back, and each vesicle being filled with a limpid fluid on the second or third day, and crusts covering the pocks on the fifth day, at which time those of the small-pox are not at the height of their suppuration.

It is proper to remark here, that the pocks are occasionally so large, and come to such maturity, as to be mistaken for the small-pox; and inoculators have been so unwary as to take matter from them, whereby some have been supposed to have taken the true small-pox a second time, and others have fallen a sacrifice to the disease, under the fatal idea of their being secure.

The chicken-pox is perfectly free from danger, unless the eruption be of the confluent kind, a rare occurrence indeed, when it is to be appreciated from the degree of violence in the accompanying fever.

TREATMENT AND REGIMEN.

The complaint is usually of so trivial a nature, as seldom to require the aid of medicine; but should the febrile symptoms run high previous to the appearance of the eruption, or after it has shown itself, it may be advisable to give the patient some cooling medicine from time to time; drinking plentifully of cool diluting liquors, and keeping the bowels open, if necessary, by some gentle aperient medicine.

After the disappearance of the eruption, one or two doses of any mild purgative had better be administered with an interval of three or four days between each.

CHAPTER IV.

MEASLES, (*Rubeola*.)

DESCRIPTION.

THE measles are known by the appearance of small eruptions, somewhat resembling flea bites, over the face and body, but particularly about the neck and breast, not tending to suppuration. Many of these spots soon run into each other, and form red streaks or suffusions, larger or smaller, which give the skin an inflammatory appearance, and produce a perceptible swelling of the face; each spot is raised a little above the surface, especially in the face, where they are manifest to the touch; in the limbs and trunk they form only a roughness.

The disease is highly infectious; often prevails epidemically, however, and the constitution that has been once under its influence is seldom liable to a second attack. It only happens when the person has at first had a very mild or spurious species of measles.

CAUSES.

The measles are produced by a specific infection, or contagious matter received into the constitution, if this is predisposed to favour the progress of such matter, and produce febrile effects in the habit; for if such a predisposition be wanting at the time that this disease, or any other of a similar nature, is epidemical, the effects peculiar to infectious or contagious matter cannot be produced. Children are more liable to the measles than grown people, and the winter is the season of the year when the disease is most apt to be prevalent.

The symptoms which characterize measles and distinguish it from other eruptive disorders, are the dry cough and hoarseness, the heaviness of the head and drowsiness, the appearances of the eyes, which are red, swelled, itchy, very sensible to light, and frequently beset with tears, together with frequent sneezing, and an acrid thin discharge from the nostrils.

SYMPTOMS.

The measles may prevail at all seasons of the year as an epidemic, but the middle of winter is the time they are usually the most prevalent; and they attack persons of all ages, but children are most liable to them. They prove most unfavourable to such as are of a plethoric or scrofulous habit. Like the small-pox, they never affect persons but once in their life; their contagion appears to be of a specific nature. The eruption is usually preceded by a general uneasiness, chilliness, and shivering, pain in the head, in grown persons; but in children a heaviness and soreness in the throat; sickness and vomiting, with other affections, such as happen in most fevers; but the chief characteristic symptoms are, a heaviness about the eyes, with swelling, inflammation, and a defluxion of sharp tears, and great acuteness of sensation, so that they cannot bear the light without pain, together with a discharge of such serous humour from the nostrils, which produce sneezing. The heat and other febrile symptoms, increase very rapidly; to which succeeds a frequent and dry cough, a stuffing, great oppression, and oftentimes retching to vomit, with violent pains in the loins, and sometimes a looseness; at other times there is great sweating, the tongue foul and white, the thirst very great, and, in general, the fever runs much higher than in the milder sort of the regular small-pox. The eruptions appear about the fourth or fifth day, and sometimes about the end of the third. On the third or fourth day from their first appearance, the redness diminishes, the spots, or very small papulæ, dry up, the cuticle peels off, and is replaced by a new one. The symptoms do not go off on the eruption, as in the small-pox, except the vomiting; the cough and headache continue, with the weakness and defluxion on the eyes, and a considerable degree of fever. On the ninth or eleventh day, no trace of redness is to be found, but the skin assumes its wonted appearance; yet, without there have been some considerable evacuations either by the skin, or by vomiting, the patient will hardly recover strength, but the cough will continue, the fever return with new violence, and bring on great distress and danger.

In the more alarming cases, spasms of the limbs, lethargy, delirium, or what more frequently happens, twitching of the tendons, supervene.

This last symptom so frequently attends the eruptive fever of measles, that by some practitioners it is regarded as one of its diagnostics.

In measles; as in other febrile diseases, the symptoms generally suffer some remission towards the morning, returning however towards the evening with increased severity.

The measles, when violent, are not usually attended with a putrid tendency; but it sometimes happens, that such a disposition prevails both in the course of the disease and at its termination. In such cases, livid or black spots are to be observed interspersed among the eruptions, and these last become livid; or assume almost a black colour. Hæmorrhages break out from different parts of the body, the pulse becomes frequent, feeble, and perhaps irregular, universal debility ensues, and the patient is destroyed.

PROGNOSIS.

We are to regard in a favourable light the febrile and other symptoms being mild; a gentle moisture diffused equally over the whole body on the coming out of the eruptions; early and free expectoration, and open bowels. On the contrary, the fever increasing after the appearance of the eruptions, great pain in the head and eyes, anxious respiration, no expectoration before the fourth day, an inflammatory affection of the lungs; a small but rapid pulse, delirium, the sudden disappearance of the eruptions, or these becoming of a livid hue, violent purging, great loss of strength, purple spots on different parts of the body, with other marks of putrescency; are very unfavourable symptoms: indeed, the latter clearly point out that a fatal termination is near at hand.

A disposition to consumption, attended by hectic fever and an obstinate inflammation of the eyes, are not unfrequently observed after measles have gone off, and ought therefore to be carefully guarded against.

DISSECTION.

The morbid appearance to be observed on dissection of those who die of measles are pretty much confined to the lungs and intestines; the former of which always show strong marks of inflammation, and sometimes a tendency to mortification. Where the patient dies under the eruption, the trachea and larger branches of the bronchia, as in the small-pox, are often covered with it, which may account for the increase of the cough after the disappearance of the eruption.

DISCRIMINATION.

Scarlatina sometimes resembles the measles so exactly as not to be easily distinguishable:

The redness of the scarlet fever is more equally diffused than in the measles, and is not in distinct spots with the natural colour of the skin interposed; yet in a few it has been observed so. In the measles the eruption rises more above the skin, and occasions a manifest roughness to the touch, which is hardly observable in the scarlet fever, except a very little roughness sometimes in the arms. In the scarlet fever there is seldom a severe cough; the eyes do not water much, and the eyelids

are not red and swollen; all which rarely fail to attend the measles. The time of the eruptions is likewise different, for it appears in the scarlet fever both in the face and arms on the second day; but in the measles it begins only about the third day to be visible on the chin and breast, and does not come to the arms and hands till the fourth or fifth day.

COMMON PRACTICE.

Bleeding, blistering, antimony, calomel, laudanum, nitre, muriate of ammonia, or squills, ice water, and other cold applications.

REFORMED PRACTICE.

Indications of Cure.—1. It is our duty in this disease, as well as small-pox, to assist nature in expelling the eruption, if her efforts be too feeble, and when they are too violent, they must be moderated by suitable evacuations.

2. The attention must be directed to urgent and particular symptoms, such as cough, restlessness, difficulty of breathing, &c.

The greatest danger in the treatment of measles, as well as in most other diseases, consists in doing too much by improper and untimely interference, and thus taking the business out of the hands of nature, and trusting it to the danger and uncertainty of art. The measles being usually attended with great inflammation, it is often the first business of the physician to moderate it; to effect which, the same means must be pursued as recommended under the head of small-pox. The first step to be taken will be to immerse the feet in warm ley water, and bathe the surface with the same, once or twice a day, according to the urgency of the symptoms, until the eruptions appear. This will relieve the head and facilitate the appearance of the eruptions.

The following infusion should be given as early as possible:

Take Saffron, 2 parts.
Virginia Snake-root, 1 part.

Make a tea, sweeten with loaf sugar, and give warm; to be repeated, and as much drank as the stomach will bear.

This infusion, with the means recommended above, will lessen the distressing and urgent symptoms attendant on the forming stage, by diminishing excessive inflammation, as well as to aid the expulsion of the eruptions.

If from debility, cold, or any other cause, the eruptions should only partially appear; or after their appearance, should there be a recession of them, in addition to these means, give *Sudorific Drops*, warm milk punch, &c. And should not this be sufficient, use the *warm bath*.

When they have made their appearance on the surface, and assume a healthy appearance, very little medicine is necessary. In this complaint, the eyes are generally very much affected. When this is the case, they may be washed with the mucilage of *slippery elm bark* and *borax water*.

There are also pueumonic or pulmonary symptoms in measles, which prove very distressing to the patient. When there is difficulty of respiration, from the accumulation of mucus, give a dose of the *Tincture*

of *Lobelia*, sufficient to dislodge it, to be repeated on the return of the symptoms—in addition to which give the following:

Pleurisy Root, (*Asclepias Tuberosa*.)

Hoarhound, (*Marrub. Vulgar.*) equal parts.

Add sufficient boiling water to make a strong infusion. Sweeten with honey. Let this be freely given.

Should the pain of the head be very great, with delirium or convulsions, continue to bathe the feet often, and apply to them the *Mustard Paste*.

There is usually considerable febrile excitement, restlessness, and pain. For these symptoms, as well as to keep up a continual moisture of the skin, give a dose, (according to the age of the person,) of the *Diaphoretic Powders*, every night, at bed-time.

Should nausea or vomiting prevail, let *Mint* tea and *Bi-Carbonate of Potash* be given.

It is of the greatest consequence in measles to attend to the bowels. In the first stages of this disease, a purgative should be given, and repeated according to the violence of the disease, and inflammation. If the excitement is very great, a moderate dose of physic may be given every day, but in general, every two or three days will be sufficient, till the eruptions have fully appeared, when it may be necessary to repeat them oftener in order to prevent any morbid matter, which may have been retained in the system, from being thrown upon some organ, and thus causing subsequent diseases, such as Chronic Ophthalmia, Dropsy, Consumption, &c. The following purgative, under these circumstances, may be given:

Take Senna,

Manna,

Cream of Tartar.

Of the two first articles, take two drams of each; add half a pint of boiling water; simmer until the strength is extracted; then add a tea-spoonful of *cream of tartar*. Sweeten. For a child of two years old give a table-spoonful every two hours until it acts upon the bowels. This purgative may be occasionally repeated.

Should any disease remain after the measles have disappeared, let it be treated the same as arising from other causes. If great debility of the system should take place, denoting a tendency to putrescency, give *yeast* mixed with a little *sweet oil* and molasses three or four times a day. Give also wine sling or sangoree, warm, with plenty of nutmeg grated into it.

Should there be diarrhœa or looseness, treat it as laid down under the head of that complaint.

REGIMEN.

Panado, gruel, ripe fruits, currant jelly, &c. may be taken. The patient may drink barley, toast water, buttermilk whey, &c. The room should be well ventilated, clean, and of a moderate temperature,

and the clothes should be often changed. Patients recovering from the measles should be careful about their diet. Their food for some time ought to be light, and in small quantities, their drink cooling, and rather of an opening nature.

This treatment will carry the patient safe through the disease, while the opposite course, bleeding, mercury, &c. will cause such debility or putrescency in the fluids, as to protract the complaint, harrass and distress the patient, if not prove fatal.

CLASS IV.

DROPSICAL DISEASES.

CHARACTER.

IN this class of diseases there is a preternatural, or morbid collection, consisting of a serous fluid in the cellular membrane in the viscera, and the circumscribed cavities of the body, impeding or preventing the functions of life. This accumulation receives different names, according to the particular parts in which it is lodged. When it is deposited in the cranium or brain, it is called *Hydrocephalus*. When it is deposited in the chest, it is called *Hydrothorax*. When in the cavity of the abdomen, it is denominated *Ascites*. When in the scrotum, *Hydrocele*. When in the ovary, *Ascites Ovarii*. When in the uterus, *Hydrometra*. When it is diffused through the cellular membrane, it is called *Anasarca*. Each of which diseases will be separately considered.

Diminished absorption, and increased effusion, or both united, may be considered as the proximate cause of the different species of Dropsy,

CHAPTER I.DROPSY IN THE HEAD OR BRAIN. (*Hydrocephalus*.)

DESCRIPTION.

By Dropsy of the Head, we understand a collection of water, either between the membranes of the brain, or in the ventricles. It is divided into two species, *internal* and *external*. *Internal* when the fluid is collected within the ventricles of the brain; *external*, when it is collected between the membranes of the brain. In this latter case, it is usually of a chronic nature, and water has been known to increase to a enormous quantity, swelling the head to a prodigious size; widely separating the bones of the head, and sometimes causing an absorption of the brain.

Pain in the head, particularly across the brow, stupor, dilatation of the pupils, nausea, vomiting, preternatural slowness of the pulse, and

convulsions, are the pathognomonic symptoms of this disease, which have been laid down by the generality of writers.

Hydrocephalus is almost peculiar to children, being rarely known to extend beyond the age of twelve or fourteen; and it seems more frequently to arise in those of a scrofulous and rickety habit than in others. It is an affection which has been observed to pervade families, affecting all or the greater part of the children at a certain period of their life; which seems to show that in many cases, it depends more on the general habit, than on any local affection or accidental cause.

CAUSES.

The disease has generally been supposed to arise in consequence either of injuries done to the brain itself, by blows, falls, &c. from scirrhus tumours or excrescences within the skull, from original laxity or weakness in the brain, or from general debility and an impoverished state of the blood.

With respect to its proximate cause, very opposite opinions are still entertained by medical writers, which, in conjunction with the equivocal nature of its symptoms, prove a source of considerable embarrassment to the young practitioner. Some believe it to be inflammatory, and bleed largely.

Dr. Withering observes, that in a great many cases, if not in all, congestion, or slight inflammation, are the precursors to the aqueous accumulation.

Dr. Rush thinks that, instead of its being considered an idiopathic dropsy, it should be considered only as an effect of a primary inflammation or congestion of blood in the brain. It appears, says he, that the disease, in its first stage, is the effect of causes which produce a less degree of that inflammation which constitutes phrenitis or inflammation, and that its second stage is a less degree of that effusion which produces serous apoplexy in adults. The former partakes of the nature of the chronic inflammation of Dr. Cullen, and the asthenic inflammation of Dr. Brown.—There are others, again, who view the subject in a very different light. Dr. Darwin supposes inactivity, or torpor of the absorbent vessels of the brain, to be the cause of hydrocephalus internus; but he confesses, in another part of his work, that the torpor of the absorbent vessels may often exist as a secondary effect.

Dr. Whytt, who has published an ingenious treatise on the disease, observes the immediate cause of every kind of dropsy is the same; viz. such a state of the parts as makes the exhalent arteries throw out a greater quantity of fluids than the absorbents can take up. From what he afterwards mentions, he evidently considers this state as consisting in debility.

As many cases are accompanied with an increased or inflammatory action of the vessels of the brain, and others again are observed to prevail along with general anasarca, it seems rational to allow, that hydrocephalus is, in some instances, the consequence of congestion or slight inflammation of the brain, or general debility.

A morbid state of the stomach and bowels, has been supposed by some to be a predisposing cause, but of all the causes which contribute to the production of this disease, cold plays the most conspicuous part.

SYMPTOMS.

Hydrocephalus may, for the purpose of instruction, be considered as exhibiting four stages or sets of symptoms; but the distinction must be viewed as a very arbitrary one; and it should be thoroughly understood, that, in many cases, the symptoms of different stages will be found blended together, or one or more of them altogether wanting.

1. The symptoms which characterize the first, or premonitory stage of hydrocephalus, are those of common *infantile fever*, such as often accompany the state of dentition or teething, or a foul stomach, or a disordered state of the bowels, more especially when complicated with the presence of worms. The pulse is quick, the skin hot, the pulse disturbed, the tongue white; there is some degree of nausea and vomiting, with thirst, restlessness, and loss of appetite. The child droops. The fauces being very dry, he picks the nose so as often to make it bleed. The body wastes, and the skin is flabby. The symptoms have irregular exacerbations and remissions; so that this state of disease is generally known by the name of *infantile remittent fever*. An exacerbation or remission of the symptoms usually takes place towards evening.

2. The second set of symptoms are those which more unequivocally direct attention to the head as the seat of disease. They are, headache, sometimes diffused, sometimes referred to a particular spot; impatience of light and noise; a flushed countenance; preternatural redness of the eyes; contracted pupil; tossing the arms to the head, and occasional screaming or shrieking without any obvious cause. With these are joined the common symptoms of infantile fever, and they denote acute inflammatory action of the vessels of the brain.

3. The train of symptoms which characterize a third stage of the disease are of a different kind. The pulse, before quick, becomes slow, intermitting, or irregular. The pupils are permanently dilated, and cease to contract on the approach of light. There is squinting. Instead of being restless, and tossing about his arms, the child falls into a state of stupor, and is insensible to things and persons around him. The screaming fits occur more frequently, and there is an almost constant moaning. The child will often vomit on being brought into the erect posture. Any sudden exertion brings on a fit of convulsion, in which the child dies. These symptoms are supposed to mark that water is now poured out by the vessels of the brain.

4. If the child survives this stage, it is occasionally found that after a time the pulse again rises, so as to beat 150 or more in a minute, and is withal small and feeble. The child lies perfectly insensible, and takes nourishment from actual inability to swallow. The stools and urine pass involuntarily. The face is pale; the tongue dry and brown, convulsions or partial paralysis occur; occasionally one side becomes perfectly paralytic. Severe pustular ophthalmia, or inflammation of the eyes is sometimes witnessed. The immediate approach of death is often preceded by gangrenous spots, appearing particularly about the neck, hips, or tips of the ears.

The first stage is sometimes wanting, the attack being sudden, and perhaps the first evidence of the disease a strong convulsion fit. In

many instances the pulse never becomes slow. In a still larger proportion of cases the disease never exhibits that remarkable change from the slow to the *rapid* pulse, which characterizes the fourth stage. Occasionally there is neither permanent contraction nor dilatation of the pupil, but throughout the *whole* course of the disease an irregularity in the contractions of the iris may be noticed. The pupil of the eye dilates on the approach of the candle, and contracts as it recedes. In a few cases I have seen children continue sensible to the last moment. Other, and even more singular varieties in the symptoms will be found recorded in the writings of authors. It is certainly worthy of remark, considering the universality of delirium as a symptom of inflammation of the brain in the adult, that aberration of intellect can scarcely be said to occur in this, or indeed in any of the diseases of early life.

The duration of hydrocephalus is liable to almost as much variation as the symptoms which characterize it. It has been known to prove fatal in a week. Some cases run on even as far as two months, but these are comparatively rare. The average duration of the complaint may be stated to be three weeks.—[*Gregory.*]

The extremities are cold, showing a determination to the head, or an unequal circulation, and in some cases there is costiveness in the commencement of the complaint. There is in others, particularly when the attack is very violent, free purging. There is also, generally, great heat or inflammation of the head, and this may be the principal cause of the disease.

CHRONIC FORM OF THE DISEASE.

It remains to notice the chronic form of Hydrocephalus; or that which is accompanied by enlargement of the skull. Sometimes this disease is congenital, but more usually it begins during the first month. In consequence of the bones of the cranium giving away, the usual symptoms of compression do not come on. The size which the head attains in this disease is often enormous. On dissection, the brain appears flattened out, but it will be found to weigh about as much as a healthy brain would have done at the same age. In the progress of the disease the functions of the body generally are very little, often not at all impaired till a short time before death. It is almost incredible how little the powers of the mind are affected by this disorder. Dr. Monro states, that in no instance seen by him could it be said that the intellect was deranged. In one remarkable case, of twenty-six years duration, in which the head measured forty-four inches in circumference, the patient displayed a very affectionate disposition towards his parents, entered into the amusements of his brothers and sisters, and enjoyed a tolerably retentive memory. Attempts have been made to afford relief to this apparently hopeless state of disease by tapping, and a case successful for a time, is recorded in the *Medico-Chirurgical Transactions* (vol. ix, page 355.) More recent observations have shown, that the risk from this operation is great, and that it is not generally to be recom-

mended. Bandaging of the head has been tried, but without material benefit. The complaint does not necessarily prove fatal at an early age, a few cases being on record of its continuance to an advanced period of life.

"The disorder," says Thomas, "manifests itself with inactivity of body, languor, loss of appetite, sickness at the stomach, vomiting, hot dry skin, flushing of the face, a parched tongue, and other febrile symptoms, which are succeeded by pains over the eyes, great sensibility to light, and a suffused redness of the eyes. The pain in the head comes on at intervals, is exceedingly acute at times, and occasions the sufferer to shriek out, while at the same time the forehead is compressed with the hand, there is extreme restlessness, a flushed countenance, disturbed sleep, and costiveness.

"After a time, the pupils of the eyes become dilated, and squinting takes place; the pain in the head is much increased, particularly towards evening; but at length this diminishes, and drowsiness succeeds a constant state of watching. The pulse also, which before was increased in quickness, is now preternaturally slow and often intermitting, the pupils become more dilated, and do not contract on being exposed to the light, and double vision, or a complete loss of sight, with lethargic stupor, succeed.

"This second stage of the disease having existed for a time (its duration being shorter or longer,) the pulse again returns to a febrile state, and becomes so extremely small and quick as to be numbered with difficulty; the eyes are now inflamed and red, there is great difficulty of breathing with snorting, the evacuations are involuntary; and at length the patient is carried off by a strong convulsive fit.

"The symptoms, therefore, which strongly characterize a collection of water in or on the brain, and distinguish it from other diseases, are the excruciating pain in the head, and intolerance of light, followed by squinting, dilated pupils, and profound stupor, as likewise by vomiting. At first the pulse is preternaturally quick, but afterwards it becomes slow and irregular.

"We are to look upon this disease as ever attended with very great danger; but particularly so when there is constant stupor with loss of sight; weak intermitting pulse, difficult respiration, involuntary evacuations, apoplectic snorting, or the head much enlarged."

DISCRIMINATION.

It is to be distinguished from apoplexy by its being attended with fever, and from simple typhus by the paroxysm being very irregular, with perfect intermissions, many times in a day. Whatever difficulties there may be in the early stage, particularly in infants, there is no disease more easily distinguished in the advanced stages than hydrocephalus; indeed, says a writer, how can we mistake when we see a child rolling its head on the pillow, or perhaps sawing the air with one hand, while the opposite side is palsied; with a hectic on the cheek, his eyelids half concealing the pupil, and the eyes deprived of their vivacity by the filmy covering of the cornea; the complete dilatation of one or both pupils, and the suffusion of the adnata; drawing a long sigh; frequently grind-

ing his teeth ; quite incoherent, or in a state of complete insensibility ; with a burning fever on the skin, or sweat forced from every pore : and all these symptoms alternating with, and at last finished by a palpitating breathing and violent convulsions ?

DISSECTION.

An accumulation of water in the ventricles of the brain, is one of the most common appearances to be observed on dissection. In different cases this is accumulated in greater or less quantities. It sometimes amounts only to a few ounces, and occasionally to some pints. When the quantity of water is considerable, the fornix is raised at its anterior extremity, in consequence of its accumulation, and an immediate opening of communication is thereby formed between the lateral ventricles. The water is of a purer colour and more limpid than what is found in the dropsy of the thorax, or abdomen. It appears, however, to be generally of the same nature with the water that is accumulated in these cavities. In some instances, the water in hydrocephalus contains a very small proportion of coagulable matter, and in others it is entirely free from it.

When the water is accumulated to a very large quantity in the ventricles, the substance of the brain appears to be a sort of pulpy bag, containing a fluid. The skull, upon such occasions, is very much enlarged in its size, and altered in its shape ; and it appears exceedingly large in proportion to the face.

COMMON PRACTICE.

Bleeding repeatedly from the arm or jugular veins, mercury, blisters, &c.

REFORMED PRACTICE.

Indications of Cure.—1. The indication of cure in this disease, is to lessen the inflammatory action, by equalizing the circulation, and thus preventing a serous effusion.

2. When water has been collected to evacuate it through the medium of the absorbents, by stimulating them to a healthy action.

From the nature of this complaint it is evident that it becomes more difficult to remove than most others. But by prompt and suitable measures, it may often be successfully treated.

When the disease is marked by inflammation, the first steps to be taken are, to use such means as are calculated to subdue it. General bleeding is resorted to by physicians generally ; but with what propriety, I am unable to determine.

It may produce, or exasperate, but can never cure the disease.

The usual effect of blood-letting, viz. that of debility or prostration, is sensibly experienced in hydrocephalus, and that, too, without at all lessening arterial action.

To reduce the inflammation, our reliance must be placed upon more appropriate means, and such, in general, must be resorted to, as have been laid down under the head of other inflammatory complaints, in order to divert the blood from the head, and recall it to the extremities and the surface. Let the feet and legs be immersed in warm *ley water*,

and well rubbed with flannel or muslin. Let the surface be bathed with the same; both of which processes must be often repeated, or according to the urgency of the symptoms.

Great reliance in the treatment of this disease must be placed upon *purgatives*; and such as act equally, through the whole alimentary canal. Our common purgative combined with *cream of tartar*, answers well for this purpose. About equal parts of the two articles may be combined, and given in any suitable vehicle.

It is difficult to lay down any precise rule for the repetition of *purgatives*, as this depends upon the violence of the disease, constitution, &c.; but as a general rule in severe attacks they may be given daily, and in protracted cases every two or three days. In most cases, immediate amendment follow their administration, either when there is inflammation, or serous effusion.

It is indispensably necessary, in this as in most other diseases, to pay strict attention to the capillary system. Such medicines must be given, and such means taken as are calculated to promote *perspiration*. In addition to bathing the feet and surface mentioned above, *sudorific* medicines must be given. For this purpose give the *sudorific* or *sweating drops* in doses according to the age of the child, to be accompanied with the free use of the infusion of *Spear-mint*, (*Mentha Sativa*) the same tea, or infusion, to be given when the child is thirsty. This plant has a threefold effect upon the system; *First*, it allays the irritability of the stomach; *Second*, it promotes gentle perspiration; *Third*, it promotes a preternatural discharge of urine.

Should the sweatingdrops prove too stimulating, and thus increase the febrile excitement, substitute the *Diaphoretic Powders*; two or three grains may be given to a child two years old three or four times through the course of the day, and particularly given at night to allay irritation, procure rest, promote perspiration, &c.

Should all these means fail of producing perspiration, which, from the dry and constricted state of the skin, may occasionally be the case, let the child be held in the arms of its mother or nurse, and a blanket thrown around it, and let both be placed over a tub, containing a strong decoction of bitter herbs. The steam must be permitted gradually to come in contact with the body of the child; after which, let it be wrapped in a blanket, and placed in a bed or cradle. If benefit is experienced from this process, let it be repeated.

In almost every case of *hydrocephalus*, there is great heat or inflammation of the head, and therefore it is necessary to apply refrigerant or cooling lotions, or applications to it. Equal parts of *spirits*, *rain water* and *vinegar*, to which, a little *salt* has been added may be often applied to the head, tepid. I have applied it cold and sometimes warm, and when I have ascertained which has afforded the most relief, I have continued it of the same temperature.

Should this only partially relieve, or should it lose its efficacy, after frequent application, let it be omitted, and let *hops* simmered with *vinegar* be applied to the whole head. Great benefit is invariably experienced by these applications. The child after great restlessness and pain, will generally fall asleep after having applied them.

In some cases where the disease has been of an unusual obstinate character, resisting the ordinary remedies of this nature, I have applied with decided benefit, a poultice of *Slippery Elm Bark* over the whole head, to be removed before it becomes dry.

Care must be taken in making these applications, that there be not too speedy an evaporation. The head must be covered with a cap or handkerchief.

I have administered, and as far as I have been able to ascertain with great advantage, the *Tincture of Foxglove* or *Digitalis*. Five or six drops, (according to age) of the tincture may be given in a little *parsley tea*, morning, noon, evening, and bed time; other internal medicines to be suspended during the day, while these drops are administered. *Purgatives*, however, may be given in the morning, if necessary, and the *diaphoretic powders* at night.

Mustard plasters must be kept to the feet, sufficiently strong to excite a little redness, after which, let them be applied between the shoulders, and thus changed alternately.

Cupping has been highly spoken of by some, in this disease. A physician of this city, became very celebrated, some years ago, for the cure of dropsy of the head, and his principal reliance was upon this operation. I have occasionally tried it in the worst or most desperate cases, but I am not clear in my mind, how far it is beneficial. In one case which was given up as incurable, and one of the worst I ever saw, as a last alternative, I ordered the child to be cupped. It appeared to mitigate all the pain, the child fell asleep, and soon recovered. It might be resorted to, should all other means fail. The cups should be placed upon the temples and nape of the neck.

REGIMEN.

It is very necessary that the room should be kept quiet, and somewhat darkened. For nourishment, give *arrow-root tea*, *milk*, *panado*, &c.

When nourishment cannot be taken by the mouth, it may be given by the way of injection. By this treatment we have cured many cases of this disease which appeared beyond the control of medicine.

CHAPTER II.

DROPSY OF THE ABDOMEN OR BELLY. (*Ascites*.)

DESCRIPTION.

By this species of dropsy we understand a collection of water in the cavity of the abdomen. The water is generally collected in the sac of the peritonæum or general cavity of the abdomen. Sometimes it is found without the peritonæum, and between this and the abdominal viscera. Sometimes the water is contained in sacs, and connected with some of the viscera. It is then called encysted dropsy.

CAUSES.

A preternatural collection of serous fluid, whether in the cellular membrane, or in the cavities of the body, is caused by absorption falling short of exhalation in these cells and cavities; and this effect may be produced either by increased effusion from the exhalant arteries, or from diminished action of the absorbents. But as in dropsy the lymphatics and thoracic duct are much enlarged; it is clear that absorption is increased, although not in proportion to the exhalation, and that therefore the cause of dropsy is in the exhalants.

Increased effusion from the exhalants may arise.

1. From their relaxation, which may be occasioned by fevers, whether typhus or protracted intermittents; by continued grief; by excessive evacuations of any kind; by the several species of intemperance; by indolence and inactivity; or by drinking only stagnant or cold water; when heated.

2. From superabundance of serum in the blood, which may be occasioned by all the abovementioned causes; by a penurious diet; by profuse hæmorrhage and repeated venesection; by weakened powers of digestion, defective chylication, and diminished energy of the lacteals; by interruption of the watery excretions, whether of urine, or of perspiration; by jaundice. It might be thought, that the superabundant serum would more readily pass by the kidneys, as aqueous fluids do in healthy subjects, than by the exhalant arteries: but when the stimulus of well *oxygenated blood* is wanting, as we see in pale, languid, and hydropic habits; the kidneys become torpid, their vital action ceases, and the quantity of urine is diminished. This we have seen exemplified in the beautiful experiments of Hales, who produced an artificial dropsy in dogs, by pouring abundance of warm water into their arteries through a tube of such a height, that the pressure of the column equalled the force of the heart, yet none of the warm water passed through the kidneys.

3. From continued pressure on the veins, as in pregnancy, obstinate flatulence, and scirrhus tumours, increasing the determination of blood to the exhalant arteries, in which cases dropsy is merely symptomatic, for when the obstruction is removed the dropsy ceases.

4. From the stimulus of inflammation. A blow on the testicles produces inflammation, of which the consequence may be dropsy of the head. A child's brain inflames, and secretion ensues. Pleurisy frequently terminates in hydrothorax, and peritoneal inflammation in ascites, or dropsy of the belly. It is in this way that cold water drunk according to this theory, when heated by exercise, produces dropsy. Cruikshank often took away fifty or sixty pints of water from a patient, which had collected in the abdomen, in the few days the peritoneal inflammation lasted, during the usual species of puerperal fever. He very properly remarks, that when the arteries of the part have once got a habit of increasing their secretions, they commonly go on for a long time, or the lymphatics may be so altered by the inflammation, as not to absorb in proportion to the discharge by the exhalants.

Among the remote causes of ascites, may be reckoned bleeding, mercury, and repeated eruptions, suppressed discharges, scarlatina, measles, inflammation of the peritonæum, &c.

The proximate cause therefore of dropsy is not as Sydenham conceives, the serous fluid itself as collected in the cells, but diminished tone in the system, as more accurately stated by Dr. Cullen.

SYMPTOMS.

This variety of dropsy is often preceded by loss of appetite, sluggishness, dryness of the skin, oppression at the chest, cough, diminution of the natural discharge of urine, and costiveness. Shortly after the appearance of these symptoms, a protuberance is perceived in the abdomen, which extends gradually, and keeps on increasing, until the whole belly becomes at length uniformly swelled and tense. The distension and sense of weight, although considerable, vary somewhat according to the posture of the body, the weight being felt the most on that side on which the patient lies, while, at the same time, the distention becomes somewhat less on the opposite side. In general, the practitioner may be sensible of the fluctuation of the water, by applying his left hand on one side of the abdomen, and then passing on the other side with his right. In some cases, it will be obvious to the ear. As the collection of water becomes more considerable, the difficulty of breathing is much increased, the countenance exhibits a pale and bloated appearance, an immoderate thirst, the skin is dry and parched, and the urine is very scanty, thick, high coloured, and deposits a lateritious sediment. With respect to the pulse, it is variable, being sometimes considerably quickened, and, at other times, slower than natural. The principal difficulty, which prevails in ascites, is the being able to distinguish, with certainty, when the water is in the cavity of the abdomen, or when it is in the different states of encysted dropsy. To form a just judgment, we should attend to the following circumstances:—When the preceding symptoms gave suspicion of a general hydropic diathesis, or state of the system, when, at the same time, some degree of dropsy appears in other parts of the body; and

when, from its first appearance, the swelling has been equally diffused over the whole belly, we may generally presume that the water is in the cavity of the abdomen. But when an ascites has not been preceded by any remarkable cachectic state of the system, and when, at its beginning, the tumour and tension had appeared in one part of the belly more than another, there is reason to suspect an encysted dropsy. Even when the tension and tumour of the belly have become general, yet, if the system or the body in general appear to be little affected; if the patient's strength be little impaired; if the appetite continue pretty entire; and the natural sleep be little interrupted: if the menses in females continue to flow as usual: if there be yet no anasarca or general dropsical affection, or, though it may have already taken place, if it be still confined to the lower extremities, and there be no paleness or sallow colour in the countenance; if there be no fever, nor so much thirst and scarcity of urine as occur in a more general affection: then according as more of these different circumstances take place, there will be the stronger grounds for supposing the ascites to be of the encysted kind. The encysted form of the disease is more difficult to cure, though its progress to a fatal termination is generally very slow; and the peritonæal dropsy is mostly very obstinate, depending usually on organic disease in the liver, or other abdominal viscera, or organs.

Ascites is not necessarily connected with a collection of water in any other part of the body, but is not unfrequently combined with anasarca or hydrothorax. It commences with a tumefaction of the abdomen, which gradually increases until it is uniformly distended, and there is a distinct fluctuation perceivable by applying one hand to the belly, and striking the opposite side with the other; the urine is diminished in quantity, and of a deep colour; there is a great thirst, and more or less fever; the face is generally pale and bloated, and the breathing is difficult when the water is accumulated in a large quantity, pressing against the diaphragm. When the disease arises in consequence of morbid affections of the liver, or any other internal viscera; the general system is frequently not much affected, but the event is always precarious. In the ascites, the water is on some occasions confined in different cysts or in one of the ovaria, in which case the fluctuation is more obscure, and in the early stage of ovarian dropsy, the tumour is situated towards one side of the abdomen, and is less smooth and uniform than in genuine ascites. When, too, the water is very viscid, or when confined in hydatids; the fluctuation will be less distinctly perceived. It is often extremely difficult to distinguish between a dropsy of the belly and a state of pregnancy. When deception is intended, the most skilful physician, with all his care and attention, is liable to suffer imposition, and on certain occasions the character both of the physician and his patient may essentially depend on a correct decision. "Dreadful to relate!" says Dr. Parr, "the trocar has more than once within our own observation, happily not by our direction, been plunged into a pregnant uterus." Dr. Good relates the following singular incident. "If dropsy occur at a period of life when the catamenia are on the point of naturally taking their leave, and where the patient has been married for many years without ever having been impregnated, it is not always easy from the collateral

signs to distinguish between the two. A lady under these circumstances, was a few years ago attended for several months by three or four of the most celebrated physicians of this metropolis; one of whom was a practitioner in midwifery, and concurred with the rest in affirming that her disease was an encysted tumour of the abdomen. She was in consequence put under a very active series of different evacuates; a fresh plan being had recourse to as soon as a preceding had failed; and was successively purged, blistered, salivated, treated with powerful diuretics, and the warm bath, but equally to no purpose: for the swelling still increased and became firmer; the face and general form were emaciated, the breathing was laborious, the discharge of urine small, and the appetite intractable; till at length these threatening symptoms were followed by a succession of sudden and excruciating pains, that by the domestics, who were not prepared for their appearance, were supposed to be the forerunners of a speedy dissolution, but which fortunately terminated before the arrival of a single medical attendant, in giving birth to an infant, that, like its mother, had wonderfully withstood the whole of the preceding medical warfare, without injury."

In forming our conclusion in all suspicious cases, we must attend with scrupulous exactness to the first appearances, the progress, the form and state of the tumour, with the appearance of the breasts and other circumstances. "If the menses continue regular; if the breasts appear flat or shrivelled, with a contracted and light coloured areola; and if the swelling fluctuate to a tap of the fingers, there can be no doubt of its being a case of dropsy: but if on the contrary, the breasts appear plump and globular, with a broad and deep coloured areola; if we can learn, which, in cases where pregnancy is wished to be concealed, we often cannot do, that the catamenia or menses have for some time been obstructed; and if the swelling appear uniformly hard and solid; and more especially if it be seated chiefly just above the pubes, or provided it be higher, if it be round and circumscribed, though we may occasionally err, there can be little or no doubt in most instances, of the existence of pregnancy. The most difficult of all cases is that in which dropsy and pregnancy take place simultaneously. It is a most distressing combination for the patient; and can only be treated with palliatives till the time of child-birth." There is also considerable difficulty in ascertaining with certainty, whether the water is contained in the cavity of the abdomen, or whether it is an encysted dropsy. The young physician will often be embarrassed in forming his judgment; but if the swelling from the beginning is equally diffused over the whole belly, the probability is strong in favour of the water being contained in the cavity of the abdomen. But if at its commencement the tumour and tension appear in one part of the belly more than another, we have much reason to suspect an encysted dropsy.—[*Thatcher.*]

PROGNOSIS.

The urine being little diminished, or becoming more copious; the swelling of the abdomen subsiding; the skin ceasing to be dry; the strength originally little impaired, and the respiration becoming free, may be regarded in a favourable light; on the contrary, intense local pain, great emacia-

tion, sympathetic fever, the disorder having been induced by a diseased state of the liver, or other abdominal viscera, are to be looked upon as very unfavourable circumstances. Dropsy of the encysted kind generally terminates, sooner or later, in the destruction of the patient.

DISSECTION.

The usual appearances to be observed in dissections of those who have died of ascites, are as follows:—We observe a large quantity of fluid effused in the cavity of the abdomen, which for the most part is serous, but it now and then presents material differences both in colour and consistence, and we frequently notice flakes of coagulable lymph floating in it. In some cases, the water, instead of being collected in the general cavity of the abdomen in one large body, is lodged in distinct small cysts forming what are called hydatids. Besides the accumulation of water in the abdomen, we often find the liver swelled; hard; tuberculated, or gorged with blood, the spleen; pancreas, and mesenteric glands considerably enlarged, the stomach occasionally schirrhous; and the peritonæum, either generally or in patches, inflamed, thickened; studded with white elevated points, and sometimes in a state approaching very nearly to gangrene. Polypi are not unfrequently observed in the large blood vessels, as also ossifications in various parts of the organs.

COMMON TREATMENT.

Bleeding, mercury, blistering, tapping, &c.

REFORMED PRACTICE.

Indications of Cure.—1. Evacuate the water.

2. Prevent the re-accumulation, by restoring the tone of the system.

To answer the first indication, give the same purgative as directed under the head of *Hydrothorax*, or *Dropsy in the Chest*. As a change, equal parts of our common purgative and *cream of tartar* may be given in the same manner. This purgative evacuates the water very copiously, lessening the tension and swelling of the abdomen. Let it be repeated twice a week, or as occasion requires.

The next preparation to be given will be the following:

Take Queen of the meadow, (*Spirea Ulmaria*.) 1 oz.
Milk-weed, (*Asclepias Syriaca*.) 2 oz.
Juniper Berries, (*Bacc. Junip.*) 2 oz.
Horse Radish Root, (*Raph. Rusticanus*.) 1 oz.
White Mustard Seed, (*Sinapis Alba*.) half an oz.
Prickly Ash Bark, (*Zanthox. Fraxin.*) 2 oz.

Bruise all these articles separately, then mix. Of the powder take a large table-spoonful, add a point of boiling water. When cool, give as much and as often as the stomach will bear. This will stimulate the kidneys, and promote a free discharge of urine, and thus aid in evacuating the watery fluid. This medicine should be continued daily.

The same oil may be rubbed upon the abdomen or belly, as recommended under the head of *Hydrothorax*. After the continuance

of this treatment, should it only partially remove the complaint, give the *Hydragogue Tincture*, made as follows :

Take Elder Bark, (*Cortex Sambucus*.) 1 lb. if green, if dry half a pound.
Add one gallon of White or Lisbon Wine.

Simmer an hour. Strain and bottle. Dose, a wine-glass three times a day. This is a very valuable diuretic, and I have found it very successful in the treatment of this disease. It has cured many cases without the aid of any other medicine. While the patient is taking this tincture, let him drink freely of a decoction made of the roots of the *vaccinium*, commonly called *whortleberry*. Let the root be dry and properly cleaned, cut fine, and bruised. Then add sufficient boiling water to make a strong decoction. This may be taken freely through the day.

Should, from any cause whatever, the disease still remain intractable, after the above treatment, then administer in a little syrup, or tea sweetened, the *Euphobia Ipecacuanha*, fifteen or twenty grains may be given at a dose, which sometimes vomits, and almost invariably purges, producing copious watery passages, and acting in a peculiarly favourable manner in all dropsical diseases.

After the exhibition of this medicine, the patient must be placed over a tub of *bitter herbs*, as directed under the head of *vapour bath*, and continued fifteen or twenty minutes, or until perspiration is produced. Let him be removed to the bed, and if sweating takes place only partially, let a tea-spoonful of the *sudorific, or sweating drops* be given in a tumbler of *catnip tea*; and sometimes it becomes necessary to apply two or three heated bricks to the sides, and legs. They should be covered with muslin that has been wet in vinegar, to create more heat or vapour.

This process or operation must be repeated about twice a week, being as often as the *Euphobia* is administered, or once a week will answer in protracted cases. The abdomen should be supported by proper bandages.

When the water is partially evacuated, or nearly so, a re-accumulation of it must be prevented by giving two or three *capsicum pills* morning, noon, and night.

The *wine bitters*, also, should be given as a tonic, to keep up the strength of the patient, create an appetite, &c.

The spirits of *spearmint* and the decoction of the *queen of the meadow*, aided by *whortleberries* and *gin*, cured Mrs. —, of a dropsy.

It is the practice to tap the patient, and draw off the water when the accumulation has become very great, but the operation is attended with only temporary benefit, and indeed the fluid appears to collect much faster after it has been drawn off, than before, which precludes all hope of recovery.

In one case, when I was called too late to cure the disease, the person having an organic complaint of the uterus, and had the water often drawn off, I repeated the operation and took from her five gallons of serous fluid.

REGIMEN.

Stimulating diet is required in every species of dropsy. *Mustard*, *horse-radish*, *red pepper*, &c. may be freely taken with food. It usually requires only a part of the remedies here recommended, to remove the dropsy in almost every stage of it, and should the treatment fail, it will probably depend upon an organic affection of some of the viscera, implicated in the complaint.

The following formula has been given to me as a remedy for the dropsy, but I am not prepared to speak of its effect, never having tried it; but from the component parts, or the ingredients of which it is composed, I think that it may prove very beneficial:

Take Mustard, half an ounce.

Juniper Berries, 1 oz.

Milk-Weed Root, 1 oz.

Horse Radish Root, 1 oz.

Black Alder Bark, 1 oz.

Mandrake Root, 1 oz.

Dwart Elder Root, or bark, 1 oz.

Bitter Sweet Bark, from the root, 1 oz.

Pound or bruise all, and add one gallon of hard cider. One wine-glass to be taken three or four times a day on an empty stomach.

CHAPTER IV.DROPSY OF THE CHEST, (*Hydrothorax*.)

DESCRIPTION.

By this disease, we understand a collection of water in the pericardium, or in the cavities of the thorax. Sometimes it is diffused in the cellular texture of the lungs without being deposited in the cavity of the thorax. Occasionally the water is enveloped in small cysts of a membranous nature, known by the name of hydatids, which apparently float in the cavity, but generally they are connected with, and attached to particular parts of the internal surface of the pleura, a membrane lining the chest.

CAUSES.

The causes which give rise to the disease, are pretty much the same with those which are productive of the other species of dropsy. In some cases, it exists without any other kind of dropsical affection being present; but it prevails very often as a part of more universal dropsy.

Bleeding and mercury may be reckoned among the most common causes of this complaint by the debility and effusion they occasion. Also inflammation of the lungs, liver, or any other neighbouring viscera. Most liquors, ardent spirits, and whatever tends to produce debility or serous effusion may cause it.

SYMPTOMS.

Hydrothorax or dropsy of the chest often comes on with a sense of uneasiness at the lower end of the sternum or breast bone, accompanied by a difficulty of breathing, which is much increased by any exertion or motion, and which is always most considerable during night, when the body is in a horizontal posture. With these symptoms there is a cough that is at first dry, but which, after a time, is attended with an expectoration of thin mucus. There is likewise a paleness of the complexion, and an anasarcaous swelling of the feet and legs, together with a considerable degree of thirst and a diminished flow of urine; occasionally the face swells and pits upon pressure, especially in the morning; and these signs of disease are accompanied by debility and loss of flesh. Under these appearances we have just ground to suspect that there is a collection of water in the chest. The symptoms which have been described gradually increase, but their progress is slow, and a considerable time elapses before the disorder is fully formed.

The difficulty of breathing at length becomes excessive. The patient can seldom remain in a recumbent posture for any time, and the head and upper part of the trunk must be supported almost erect. The sleep is frequently interrupted on a sudden by alarming dreams, out of which the patient quickly starts up in bed, with a sense of impending suffocation. Convulsive efforts of the muscles subservient to respiration, resembling an attack of spasmodic asthma, with violent palpitations of the heart, generally accompany the paroxysms, which are also frequently excited by the most trifling voluntary motion, or by a fit of coughing.

When afflicted with these distressing symptoms, the patient is under the necessity of continuing erect, with his mouth open, and he betrays the utmost anxiety for fresh air. His face and extremities are cold: the pulse, with little exception, is feeble, irregular, and intermits in a degree seldom experienced in other disorders, and a pain or sensation of numbness frequently extends itself from the heart towards the insertion of the deltoid muscle of one or both arms. Excepting a livid hue of the lips and cheeks, the countenance is pale, and indicates a peculiar anxiety and ghastliness of appearance, and, together with the upper parts of the body, is usually covered with a profuse clammy sweat. Drowsiness, coma, or delirium, occasioned by the difficult transmission of the blood through the lungs and want of sleep, frequently attend the latter periods of hydrothorax, and from the same cause the expectoration is sometimes bloody. Now and then a sensation of water floating about can be distinctly perceived by the patient, or any sudden change of posture.

Dr. Maclean, who wrote a treatise on Hydrothorax, thus accurately gives the symptoms of this disease.

The respiration is more or less affected in every case. "It is sometimes quick, hurried, anxious, and irregular; while at others it is slow and laborious: at times it is performed with a peculiar wheezing noise, as if the air were passing and repassing with difficulty through a narrow straitened, or as one of my patients expressed herself, through a metal

tube." In hydrothorax, the patient cannot lie down for half a minute in the worst cases and most advanced periods.

But although in some instances the patient be able to lie down without inconvenience, he is often suddenly roused soon after going to sleep by a most distressing sense of suffocation, oppression, and extreme anxiety about the chest, attended with palpitation; and if able to walk, he probably runs to a window for fresh air, and makes several laborious inspirations before he recovers his ordinary breathing. Under these most distressing paroxysms, the face is generally livid, and even black, and, together with the neck and chest, is covered with profuse sweats, appearing in large drops, which are generally followed by a remission of these symptoms, but not that complete intermission which succeeds the asthmatic paroxysm. The intellectual functions are, under these circumstances, much disturbed, the patient talking incoherently, and labouring under temporary delirium, which subsides with the paroxysm. As the disorder advances, he is thus immediately attacked on attempting to lie down; so that at length he is obliged to seek repose in a chair or bed, supported by pillows, in a sitting posture, sometimes with the chest inclined forward: even in this situation, as the quantity of water increases, he is suddenly awakened by similar sensations, and, dreading the repetition of this alarming symptom, he has no natural refreshing sleep, though he be overcome by constant drowsiness and stupor."

There is commonly greater difficulty of lying on one side than on the other, this depends on the site, diffusion and quantity of the water; if confined entirely to one side, the patient can only lie on this.

The countenance is much changed in hydrothorax; the lips, nose, eye-lids, and those parts of the face are usually florid, become livid; while the rest of the face is pale and sallow, and the whole exhibits an expression of extreme anxiety and suffering.

The urine is commonly *scanty* and *high-coloured*, and deposits, on cooling, a copious deep pink, or yellowish branny sediment. In a few instances the urine is of a dark dusky brown hue, without sediment, but with an oily film on its surface. Cases occur in which the urine does not deviate from the natural state till toward the advanced stage. In idiopathic or primary hydrothorax, the disorder sometimes makes considerable progress before the determination to the kidneys is sensibly diminished, or before the quality of the urine is altered.

Palpitation of the heart, irregularity and intermission of the pulse, may be regarded as among the most frequent attendants on hydrothorax. But these symptoms are much varied in different cases;—and we know that, in some instances, they are not present.

The palpitation of the heart and inequality of the pulse, may either precede, immediately attend, or succeed the watery effusion; and it is of consequence to ascertain the time of their appearance: if they precede the symptoms of serous accumulation, especially in old age, or after acute inflammation of the chest, it may be inferred they arise from one or other of the organic affections of, or near the heart, but if they commence about the same time with, or soon succeed, these symptoms, it may reasonably be concluded they are owing to the pressure of the water on the surface of the heart and lungs.

At some period or other of the disease, the extremities become more or less œdematous.—

“The anasarcus limbs of genuine hydrothorax are colder, and more livid, than those of common anasarca; and this will be found proportioned to the degree of interruption of respiration.

Being suddenly roused from sleep by a sense of suffocation, is so frequent a symptom as to have been deemed diagnostic.—“This symptom, like every other, individually considered, affords no positive evidence of the presence of water; but when united with the other leading ones mentioned, however obscurely marked these may be, it ought to remove every doubt as to the nature of the disease.”

Besides these more essential to the disease, there are other symptoms of frequent occurrence, as cough, dry, or humid expectoration of blood, and pains in different parts of the chest. With regard to external tumor, and fluctuation of water, he remarks, that a tumor, elevation, or inequality of some parts of the chest may sometimes be observed; or if the body be exposed to view, one side appears larger than the other. This swelling is more frequent, and sometimes very considerable, about the epigastrium, than any other part. In some cases, it is occasioned solely by the descent, or protrusion of the diaphragm, occasioned by the water; in others by the liver being thrust downwards and forwards from its natural seat, either in a sound, but more generally in a diseased state, by the same cause. The fluctuation is regarded, as merely a symptom of the imagination.—“But though it cannot be either heard, or felt against the fingers by the usual test used in dropsy, yet the patient sometimes observes that he has the sensation as if water were contained in the chest, passing from one side to the other in turning, or as if the heart were moving in a fluid.”

The natural functions are variously disordered in the progress of hydrothorax; the appetite and digestion are sometimes impaired; the tongue foul and furred; and the bowels are various, but generally bound. The pressure of the water on the œsophagus has sometimes occasioned a distressing difficulty of swallowing.

Stupor and drowsiness are not uncommon attendants. In a few instances delirium, and even mania has been observed. The blood is dark, the crassementum is loose and soft, the proportion of serum is large, and the inflammatory buff is rarely if ever to be seen upon it.

Every part of the body shews, in a striking manner, the effect of this morbid change of the solids and fluids. Not only those parts the most distant, but the nearest to the heart, feel the influence of a languid and irregular circulation of dark venous blood. The whole surface is cold and chilly, except under the circumstances mentioned above, when profuse sweats break out on the upper parts of the body; the natural perspiration is diminished, and sweat is with difficulty excited by sudorific medicines.

The progress of hydrothorax to a fatal termination, is, it is remarked—

“Regular and uniform, when art has not interposed her salutary aid; and this has been too generally the case under medical treatment, in so much that it is numbered among the incurable diseases by most medical

writers. In consequence of the increased pressure of the accumulated fluid on the heart and lungs, the patient may be said to be suffocated; or he dies apoplectic, from the pressure of dark venous blood on the brain, not unfrequently accompanied with serous effusion, either on its surface or in its ventricles; so that death in this disease is sometimes analogous to that from drowning or hanging. The fatal event is generally sudden, and sometimes unexpected, probably when they appear to be a momentary interval of repose, frequently during, or after a meal, or any sudden bodily exertion."

The precise seat of the fluid in hydrothorax, it is not always easy to determine, and more especially, it has been found difficult to ascertain those symptoms which are peculiarly indicative of dropsy of the pericardium or the investing membrane of the heart.

DISCRIMINATION.

It is sometimes somewhat difficult to distinguish this complaint from some others nearly allied, or somewhat similar, such as *lingina pectoris*, *asthma*, organic affections of the heart, aneurisms and diseases of the liver, but by a close attention to the symptoms which have been pointed out, we shall be able to distinguish between them with great accuracy.

When the following diagnostic symptoms are present, there can be no doubt of the real nature of the complaint.

1. In dropsy of the chest, there is a tightness and sense of fulness across, or in, the chest.
2. A pain at the bottom of the sternum or breast bone.
3. Palpitation of the heart.
4. Difficulty of laying in a recumbent position with a sense of suffocation in such a situation.
5. A diminution of urine, and which is of the colour of brown beer or brandy.

PROGNOSIS.

Unfavourable Symptoms.—1. Palpitations of the heart, steady and constant, appearing early, not subsiding on rest, or on the evacuation of the water, together with a pulse in every way corresponding.

2. *Dyspnœa*, or *orthiopnœa*, continuing, with more or less violence, under similar circumstances, and threatening suffocation on attempting to lie down, or on any sudden motion.

3. Severe pains of the chest, especially about the seat of the heart, or in the direction of the large arterial trunks, and continuing with little or no intermission.

4. The disease suddenly supervening to pneumonia, or other acute inflammatory affections of the chest, particularly if these have been neglected in the beginning, or if immoderate bleedings or drastic purgatives have been used in their advanced stages.

5. The disease coming on in constitutions previously exhausted by intemperance, especially by a constant career of tippling or dram-drinking; by the long continued operation of the depressing passions;

in very advanced periods of life; or from extreme bodily weakness or exhaustion in any age.

6. Scirrhus enlargements, or irregular knotty indurations of the liver, with confirmed jaundice.

7. Distortion or malformation of the chest.

Favourable Symptoms.—When the disease commences its attacks under circumstances the reverse of those mentioned; when there is no reason to apprehend the presence of visceral affection of any magnitude: and when all the unpleasant symptoms gradually recede as the medicines begin to act upon the kidneys, we may venture to hold forth sanguine hopes of a happy issue, provided the treatment be directed by skill and judgment, and pursued with unremitting attention for a due length of time.

DISSECTION.

Dissections of this disease show that, in some cases, the water is either collected in one side of the thorax, or that there are hydatides formed in some particular part of it; but they more frequently discover water in both sides of the chest, accompanied by a collection in the cellular texture and principal cavities of the body. The fluid is usually of a yellowish colour; possesses properties similar to serum; and, with respect to its quantity, varies very much, being from a few ounces to several quarts. According to the quantity, so are the lungs compressed by it; and, where it is very considerable, they are usually found much reduced in size. When universal anasarca has preceded the collection in the chest, it is no uncommon occurrence to find some of the abdominal viscera in a scirrhus state.

COMMON PRACTICE.

Bleeding, mercury, blistering, salt-petre, squills, cantharides, iron, blue vitriol, &c.

Some of these remedies, (if such they may be called,) induce dropsy, yet they are prescribed to remove it!

REFORMED PRACTICE.

Indications of Cure.—1. Evacuate the water.

2. Prevent its return by exciting a healthy action of the absorbents.

It will be proper to commence the treatment of the *hydrothorax*, by administering the following cathartic:

Take the Mandrake or May-apple, (*Pod. Pellatum*.)

Cream Tartar, (*Sup. Tart. Polass.*)

Peppermint Plant, (*Menth. Pip.*) of each, equal parts.

Of this powder, give a large tea-spoonful every four hours until it purges. It may be given by pouring a little boiling water upon the powder, and sweetening it with loaf sugar, or it may be taken in molasses, or common syrup; and *mint tea* may be freely drank after taking it. This purgative is remarkably well calculated to evacuate the water in this, and other species of dropsy. It acts as a *diuretic* and as a *hydragogue*, and immediately improves the condition of the patient by the copious evacuations of water which follows its exhibition.

I have sometimes substituted the *jalap root* for the *mandrake*, which answers an excellent purpose; but from the remarkable success I have more recently had, by using the former, I am inclined to give it the preference. One of these cathartics is by no means sufficient. They must be continued until the disease is removed, and given according to the strength, constitution, &c. As a general rule, one or two in the course of a week, is sufficient. After the operation of this medicine, and the stomach has become quieted, administer the following:

Take Spearmint, (*mentha sativa*.) pulv. 2 oz.

Foxglove, (*digitalis purpurea*.) pulv. 2 drams.

Divide into twelve powders. Add fourteen ordinary sized table-spoonfuls (seven ounces) of boiling water, to one powder, which contains ten grains of the *foxglove*. Of this infusion, take a table-spoonful every hour through the day, or two table-spoonfuls every two hours. Should it produce any nausea, or giddiness of the head, half the quantity only should be taken. It must be recollected that one powder must be taken in this form each and every day. I have sometimes employed the *tincture of digitalis* in place of the above, and it has been followed with a good effect. This infusion has a very powerful and sovereign effect in hydrothorax, or dropsy of the chest. A very short space of time elapses before there is a sensible improvement. It promotes reabsorption of the serous fluid, and causes a free discharge of urine. It is powerfully aided by the free use of the following tea, all of which articles are strongly diuretic:

Take Spearmint,

Parsley,

Elder Flowers,

Dandelion Roots and Tops, a handful of each.

Put them into a tea pot, and add sufficient boiling water to make a strong infusion. This to be taken freely through the day. The patient must be rubbed or anointed upon the chest and abdomen, morning and evening, with warm sweet oil, to which a few grains of *capsicum*, or cayenne pepper has been added, sufficient to heat or stimulate the skin. When the water has been evacuated, which will be known by a subsidence of the symptoms, give morning, noon, and night three of the stimulating, or capsicum pills. They act as a tonic, and in some degree as a diuretic. If the water should diminish very slowly, their use may be commenced earlier, as they will aid this evacuation.

Without great care, using preventives, &c. the disease is liable to return after convalescence. It will therefore be necessary to continue in the use of the medicine sometime after the patient is apparently well. Give also as a tonic, and to prevent a re-accumulation of water, the *wine bitters*. Half a wine-glass may be taken three or four times a day on an empty stomach.

Should not this treatment cure, (and I know not that I now remember a single failure,) *emetics* must be given every third day, to be accompa-

nied with the use of the vapour bath, purgatives, and the hydragogue tincture.

Dr. Stark, a German physician of Pennsylvania, became very celebrated for the cure of the dropsy in the chest; and patients repaired to him from a distance of an hundred miles. When he left that part, he states that a practitioner offered the sum of one hundred dollars for the method of treating it. On his arrival to this city he called upon me for patronage, and although I gave him the use of my office to assist him into practice, he was unwilling to impart to me his treatment. After a year or two, however, I prevailed upon him to dispose of it; and which I have found, in conjunction with my own remedies, a sovereign cure. I subjoin his treatment, and the reader will see wherein it differs from my own:

“1. Take *Digitalis*, the plant, two drams, divide in twelve powders, ten grains each, after this add fourteen table-spoonfuls of boiling hot water. Take one table-spoonful every hour, or two every two hours.

2. *Calomel*, one grain every morning and evening.

3. Bathe the breast and abdomen every night and morning with red precipitate ointment.

4. Take sweet or olive oil, warm it and anoint the whole body in the morning and evening.

5. Drink an infusion or tea of *parsley*.”

REGIMEN.

The diet should be light and nutritious. Pepper sauce may be freely taken with food, *mustard*, *horse-radish*, and *cayenne pepper*, all which possess medicinal properties in this disease.

CHAPTER IV.

DROPSY OF THE OVARIA. (*Ascites Ovarii*.)

DESCRIPTION.

THIS species of dropsy begins without much pain, or constitutional disturbance. It is not usually discovered until it is much enlarged, and then appears on one side. It is known by its being moveable when the patient is in a recumbent position, and by passing the finger up the vagina, the tumour may be felt which distinguishes it from dropsy of the abdomen; but it seldom is the case that the tumour rises above the pelvis, until *anasarca* appears, and prevents the tumour from being discovered. The fluctuation is not very perceptible; the disease being generally occasioned by the fluid, which is in white small bladders of various sizes called *hydatids*.

Until the tumour has acquired a considerable size, the patient's health suffers no very visible diminution; it then induces pain and numbness

in the thigh corresponding with the side in which the swelling is situated, and by degrees the body becomes wasted, the appetite bad, and the strength greatly impaired.

The progress of the disease varies in different cases. In some, dangerous symptoms have ensued soon after the disorder became apparent, whilst others have laboured under it for a year or two previous to its destroying the patient. Nothing can be more uncertain than the progress and termination of the complaint; for experience has proved, that under the most apparently desperate circumstances the health has been in some measure restored, or life protracted for a considerable time, while on the other hand, where no urgent symptoms have been manifested, a sudden aggravation of the disease has occurred, and a rapid advance to a fatal termination has taken place.

Nothing satisfactorily can be offered respecting the causes of a dropsy of the ovarium, as women of every condition and age are found to be afflicted with it.

Dropsy of the ovarium is to be distinguished from ascites by attending to the symptoms which have been already enumerated under the head of the latter. Great caution will be requisite in not mistaking pregnancy for this complaint, as fatal consequences might ensue therefrom. Fortunately the two are readily distinguished from each other.

The quantity of water in ovarial dropsy is commonly from thirty to thirty-five pints, and some cases have occurred where it has been nearly a hundred.

TREATMENT.

Some are in the habit of tapping or drawing off the water in this disease; but this is attended with little or no benefit, and cannot be considered good practice. The only reliance must be upon the treatment laid down in other species of dropsy, particularly *ascites*.

DROPSY OF THE WOMB. (*Hydrops Uteri.*)

It is sometimes the case that there is a collection of water or hydatids in the womb. A tumour appears over the hypogastric region, which gradually increases, and somewhat resembles the figure of the uterus. It yields upon pressure, and there is a sense of fluctuation. There is not much, if any diminution of urine. It is distinguished from the dropsy of the abdomen, by its being confined to the region of the uterus.

This disease is soon followed by general dropsy, a slow fever, and emaciation.

TREATMENT.

The same as *ascites*.

CHAPTER V.

CELLULAR DROPSY. (*Anasarca*.)

DESCRIPTION.

By *anasarca*, is to be understood a collection of water in the cellular membrane, which is extensively diffused throughout the body, and which is moistened by a fluid thrown out by the arterial exhalents. In various ways, the quantity of this fluid may be increased, constituting the disease, called *anasarca*, or cellular dropsy.

SYMPTOMS.

Anasarca, or dropsy of the cellular membrane, usually commences in the lower extremities, and first shows itself with a swelling of the feet and ankles towards evening, which by degrees ascends, and successively occupies the thighs and trunk of the body. The swelling is soft and inelastic, retaining for a time the pressure of the finger; the colour of the skin is paler than usual, and, in the more advanced stages of the disorder, now and then exhibits more or less of a livid hue. When the effusion has become very general, the cellular membrane of the lungs partakes of the affection, the breathing becomes difficult, and is accompanied by frequent coughing and the expectoration of a watery fluid. The urine is scanty in quantity, very high coloured, and generally deposits a reddish or pinky sediment, although in a few instances it is of a pale whey colour. These symptoms are accompanied by insatiable thirst, dryness of the skin and costiveness, the countenance becomes sallow, and there is sluggishness and inactivity, together with a slow fever. When the cellular membrane of the legs and ankles is greatly distended, the water is apt to ooze through the pores of the skin, or raise it up in small blisters. The pulse is usually small and feeble.—[*Gregory*.]

CAUSES.

Pathologists in all ages have occupied themselves in enumerating the several causes from which *anasarca* may originate. Without following them into details, it may be useful to point out those which are most frequently observed to operate.

1. Local *anasarca*, sometimes arises from pressure accidentally made on veins, as by the gravid uterus, swelled glands in the groins or armpits, or a tight garter. The same result occasionally follows, even in healthy states of the system, from a too long continuance in the erect posture.

2. General dropsy arises from a variety of causes which concur in producing a debilitated state of the whole body, and more particularly perhaps of the venous system. Hence it is that *anasarca* succeeds severe

hæmorrhages (natural or artificial,) fevers, and fluxes; and that it occurs so frequently in the latter stages of diabetes, pulmonary consumption, and amenorrhœa, or obstructed menses. Under such circumstances the dropsical symptoms commence slowly, and as it were *imperceptibly*. There are instances, however, in which the disease comes on suddenly; and the cause of this *acute* form of *anasarca* is various.

Exposure to cold and damp has frequently been followed by dropsical swellings. I have known them to commence within forty-eight hours from the application of the exciting cause. In this variety of the disease the pulse will commonly be found full and strong, with perhaps some degree of hardness. There will be present at the same time symptoms denoting an affection of the thoracic organs; tightness across the chest, with cough and dyspnœa, aggravated by exertion and the recumbent posture, and producing *head-ache*.

General *anasarca* arises, in the next place, from excess in the use of spirituous liquors. When the attack is sudden, this dropsy is of the *arterial* kind, and attended with the symptoms just described as accompanying hydroptic effusion from cold.

Another cause of *anasarca* is disturbance in the uterine functions.

The only other circumstance requiring attention in *anasarca*, is its connection with some of the febrile eruptions. It has long been known, that dropsy, particularly in the form of *anasarca*, occasionally follows scarlet fever. The same phenomenon is sometimes observed as a sequel of measles, small-pox, and erysipelas. It has been conjectured, that the dropsical tendency is here dependent on a morbid condition of the *cutaneous exhalants*, the consequence of the eruption; and there are sufficient grounds for this notion. The accompanying symptoms occasionally point out some obscure affection of the heart and lungs existing at the same time. Under all circumstances the practitioner will do right to view this form of disease as of *constitutional* origin, and to be more solicitous about the state of the *system* than of the skin.

From the remark now offered it will appear, that the pathology of *anasarca* is closely connected with that of hydrothorax. In many cases these forms of dropsical effusion coexist, and the remedies are the same for both. Notwithstanding all the causes which are assigned for dropsy, it is somewhat doubtful whether this one has been yet discovered.

Is it not probable that the first cause of every species of dropsy exist in the kidneys, in consequence of their ceasing to perform their office, or failing to secrete the urine.

When this is the case, it is retained or reabsorbed and taken into the circulating mass. The exhalents then pour it out in greater quantities than the absorbents can take up, consequently, serous or watery effusion, and a collection follow which we term dropsy.

All know that a diminution of urine is the characteristic symptom of dropsy, and that diuretics or medicines which stimulate the kidneys to a healthy action, or cause them to secrete or separate the urine from the blood, immediately relieves or cures the disease. Does not this phenomena then explain the cause or nature of this complaint?

In those who have died of *anasarca*, the whole of the cellular membrane has been distended with a fluid, mostly of a serous character. Various organic diseases have occurred; and the blood is said to be altered in consistence, according to the degree of the disease. In general a cure can be more readily effected when it arises from topical or general debility, than when occasioned by visceral obstruction; and in recent cases, than in those of long continuance. The skin becoming somewhat moist, with a diminution of thirst, and increased flow of urine, are very favourable. In some few cases the disease goes off by a spontaneous crisis by vomiting, purging, &c

COMMON PRACTICE.

Mercury, bleeding, blistering, antimony, &c.

REFORMED PRACTICE.

The first object will be, as in every kind of dropsy, to evacuate the water, and afterwards to prevent a re-accumulation of it.

To effect which, a very similar course must be pursued, as recommended under the head of *ascites*, or *dropsy of the abdomen*.

If the swelling is confined to the legs, let them be steamed every night over a large tub containing a strong and hot decoction of bitter herbs, comprised of *tanzy*, *wormwood*, *hoarhound*, *hops*, and *catnip*. The legs should be held over this fomentation hot, or warm as possible, and if they do not perspire, let a heated brick or stone be put into the decoction. A blanket should be thrown over the legs to prevent the escape of the steam. If the swelling extends to the abdomen, the patient may sit over the vapour or steam, with a blanket around him, that a general perspiration may be excited. This process is to be repeated two or three times a week, or according to circumstances. It is always necessary to aid the process by giving some *diaphoretic infusions* or *tea*, as *sage*, *hysop*, *mint*, or *catnip*.

The following cathartic may be given about twice a week:

Take Jalap Root, pulverized,
Cream of Tartar,
Spearment, pulverized, equal parts by weight. Mix.

Of this compound give a tea-spoonful every three hours until it acts freely upon the bowels. After this let the *hydragogue tincture* be given, to be accompanied with the use of the following infusion or tea:

Take Indian Hemp,
Milk-Weed,
Dandelion Roots, equal parts.

Make an infusion and drink through the day.

When every other means have failed in curing the dropsy, I have succeeded by giving repeated emetics. They appear to give a new impulse or tone to the whole system by the shock they occasion, or by the sympathetic effect they exert, particularly on the skin and absorbent system. I have found the common *emetic powders* to be an excellent pre-

paration; and it may be given two or three times a week. I recently cured a very difficult and complicated case of dropsy, resulting from the use of mercury, (given to cure the intermittent fever,) by administering an *emetic* twice a week, and sweating the patient as often by the *vapour bath*, as before mentioned. When there is great swelling in any part, fomentations of bitter herbs afford great relief. Should the disease prove obstinate, give fifteen or twenty drops of the tincture of *foxglove* four times a day in a tumbler of *spear-mint tea*.

The following preparation may be taken the same as the tincture, and at the same time:

Take common Whortle-berries, dried and bruised, 4 oz.

Add sufficient boiling water to cover them. Let it stand two hours, then add a quart of fourth-proof Holland gin. Of this give from half to a wine-glass morning, noon, and evening. I have seldom known this preparation, though simple, fail of evacuating large quantities of water, and producing a very salutary and permanent benefit in this and other kinds of dropsy. Give also in place of the common physic, fifteen or twenty grains of the pulverized root of the *euphorbia ippecacuanha*. In all other respects the *anasarca* must be treated the same as laid down under the head of *ascites*.

CHAPTER VI.

DROPSY OF THE SCROTUM. (*Hydrocele.*)

I SHALL here only write a few words upon this disease, but shall treat it more fully under the head of surgery. I shall merely state that it consists in an effusion of serum or water in the coats of the testicle. There is a tumour formed which slowly increases and appears transparent, or light and elastic. Sometimes a fluctuation of water can be discovered. Great care is necessary to discriminate between this, and hernia or rupture. In the last complaint, the tumour recedes in a recumbent position, but not so in the latter.

TREATMENT.

Tapping the tumour and drawing off the water, is the usual course prescribed; but this is not calculated to effect a radical cure; not only so, it is desirable to cure the complaint without an operation, particularly in infants and children, and this may be done by using the same remedies recommended in other kinds of dropsy; particularly *anasarca*.

It will be necessary, also, to use fomentations of bitter herbs to the scrotum, and to administer two or three times a week purgatives and

diuretics. I have succeeded admirably in every case, by pursuing this method.

TYMPANITES.

THE symptoms are elastic distension of the abdomen, not readily yielding to pressure, and sounding like a drum, with costiveness and emaciation, but no fluctuation.

In the beginning we observe flatulence, or difficulty of breathing, that is, hollow rumbling of the bowels. Thirst and loss of appetite, pain in the loins, and dyspnoea with frequency of pulse, succeed, and atrophy brings up the rear.

The persons most liable to this disease are chiefly those of a relaxed and irritable habit, such as have been debilitated by profuse evacuations, by intermittents, or by typhus fever; patients who have recently suffered by spasmodic and inflammatory affections of the bowels, and particularly women after child-birth.

It is occasioned sometimes by *ascites* and morbid affections of the liver; at other times by biliary or renal calculi; frequently by worms; and in one most curious case, reported by Van Swieten, it arose from hæmorrhagic effort after suppression of the catamenia, and of the hæmorrhoidal flux.

It may likewise be induced by poisons, when they occasion flatulence and spasmodic constriction in the bowels.

From what has been said, we cannot be at a loss for the proximate cause of this disease. There is evidently a preternatural distension of the intestines by air, producing loss of tone in the muscular fibres of the part distended, and, from what has been suggested on the process of digestion, it must appear, that the extrication of this air, or gas, in the stomach or the bowels, is to be attributed to some defect either in quantity or quality of the several fluids, the saliva, pancreatic juice, and bile, which are mixed with our aliment to assist in the reduction of it into chyle, and to restrain the progress of fermentation in the fæces, whilst they are passing the intestines. But this alone cannot be the proximate cause of tympanites; for with this must be united spasmodic stricture in some part of the intestines, which prevents the escape of wind, and this spasmodic stricture must be occasioned by some irritation in the system.

This view of the proximate cause is confirmed by anatomical observations, particularly by those of Platerus, Littre, and De Haen. These celebrated physiologists discovered the colon distended to the size of a man's thigh, and the stomach with small intestines three times their usual bulk. These distensions were observed in different parts of the alimentary canal, sometimes in the stomach, at other times in portions either of the large or of the small intestines forming constricted cells, and sometimes in all of them together. With air, they discovered likewise an amazing quantity of hardened fæces. We cannot therefore entertain a doubt as to the nature of this disease. Heister, in his extensive practice

during the space of six and forty years, never found air as the cause of tympanites in the cavity of the abdomen, till Ruysch showed him one case in which that cause was evident.

TREATMENT.

Agreeable to this idea of the proximate cause, the indications of cure must be:

1. To relieve the spasm.
2. To restore the tone of the intestines.
3. To evacuate the water when it exists.

It will be necessary in treating this disease, occasionally to administer a purgative; but we must depend more, for a cure, upon repeated stimulating injections. The following I have found very excellent:

A strong decoction of the seeds of Angelica, 1 pint,
Milk, 1 pint,
Molasses, 1 gill,
Olive Oil, 1 gill,
Salt, 1 tea-spoonful.

Introduce as much of the liquid, each time, as possible, to be repeated daily, or twice a day, according to the symptoms.

This discharges large quantities of wind, and soon relieves the patient.

I have also found in this complaint, the *hydragogue tincture*, contribute essentially to the cure.

I have also given with excellent effect; the *whortle-berries* and *gin*, as mentioned under some of the preceding species of dropsy:

It appears that flatulence alone, is not the sole cause of tympanites. It often depends on watery effusions or collections, and when they are of the encysted kind, the disease is very difficult to cure.

I lately attended a lady in this city, whose case appeared to be almost hopeless, having been of long standing, and reduced her exceedingly: But I cured her by the above treatment.

Great care is necessary to distinguish between tympanites, and other forms of dropsy, particularly by those physicians who perform the unnecessary and useless operation of tapping.

When I first commenced the practice of medicine in this city, I was called in company with three other physicians, to a female, said to have the dropsy. After they all examined her, and considered the disease *ascites*, or *dropsy* of the *abdomen*, my opinion was asked. With much reluctance, I gave it, as it was directly in opposition to the other elderly and experienced physicians. They decided that the woman had the *ascites*, and must be tapped. I, on the contrary, pronounced it the *tympanites*.

CLASS V.

CEREBRAL DISEASES.

CHARACTER.

WE understand by this class, cerebral diseases, those which proceed from a deranged, or impaired state of the functions of the brain.

CHAPTER I.

INSANITY OR MENTAL DERANGEMENT. (*Mania*.)

DESCRIPTION.

Insanity or mania may be termed a false perception of things displayed most generally in the opinion formed by the patient of his nearest friends, or things in general; in a want of due connection of the train of thoughts marked by an incoherence or raving; and in a resistance of the passions to the command of the will, accompanied, for the most part, with a violence of action and furious resentment at restraint. The incapacity of distinguishing the diseased functions of the mind, and the irritability of our actions, in the opinion of Dr. Spurzheim, constitute insanity.

Some writers contend that insanity is a disease wholly of the mind, and not of the body; whereas others suppose that mania in general depends on a physical origin, or arises from disorganization, or morbid action of some part of the body, derangement of the intellectual faculties being only the effect; which supposition is somewhat supported by the appearances frequently to be observed in the head on dissection. But every species of madness, whether it has originated in the mind or the body, becomes the same by continuance. In madness, both the mind and the body must ultimately be diseased; for a disease of the mind soon produces one in the body.

CAUSES.

Proximate Cause—Dr. Rush states, after refuting the idea, that mania is occasioned by a morbid condition of the brain, stomach, spleen, liver, &c. that the cause of madness is seated primarily in the blood-vessels of the brain, and that it depends upon the same kind of morbid and irregular actions that constitutes other arterial diseases; but such is the connection between body and mind, and such are the operations of moral and physical causes upon it, that the proximate or immediate cause of insanity, is very difficult to explain. All we know is that certain impressions made upon the mind, or sensorium, are sufficient to destroy or suspend that principle or faculty which enables a person to perceive and judge and act rationally and consistently.

It seems to take place somewhat similar to the manner in which a musical instrument is thrown out of tune. Sufficient force exerted upon it, is enough to effect this purpose, and thus with the mind. Certain agents or impressions seem capable of unhinging the sentient faculty, or throwing it into such disorder that it becomes incapable of directing the judgment or performing its functions.

Dr. Rush says, I infer madness that exists in the mind from the remedies which most speedily and certainly cure it; being exactly the same as those which cure fevers, or disease in the blood-vessels, or in other parts of the body.

Remote and Exciting Causes.—Among the various causes of mental derangement, we may enumerate certain local diseases, such as enlargement of the bones, tumours and dropsy of the brain. Certain diseases of the brain also, such as palsy, epilepsy, apoplexy, head-ache, &c. gout, dropsy, consumption, pregnancy, and febrile diseases, profuse evacuations from bleeding, mercury, or other causes. Perhaps the most fertile of all causes of insanity, is the use of ardent spirits. Inordinate sexual desires is another cause of insanity.

A very common practice among young men, called onanism, is another cause of the disease. Also great pain, great labour or exercise, very hot or cold weather, narcotic substances taken into the stomach, may produce it; worms, foreign matters retained in irritable parts of the body also, translations of morbid humours to the brain, hysterics, cutaneous eruptions, measles, inordinate ambition, intense study, and the passions, such as joy, terror, love, fear, grief, shame: also from defamation, calumny, ridicule, loss of property and beauty, and domestic quarrels.

It is said that extravagant joy produced insanity in many of the successful speculators in the South Sea expedition in England.

Charles the VI. became deranged from a paroxysm of anger. Religious enthusiasm, or mistaken notions of religion, is another cause. But perhaps one of the most common causes of insanity is the struggle between *conscience*, or a sense of duty on the one hand, and *natural propensities* on the other.

I have no doubt in my mind, if people would adhere strictly to the principles of true religion, they never would be afflicted with insanity.

Eberle, in enumerating the causes of insanity or mental derangement, has made some very interesting quotations, which I here subjoin.

“The *predisposition* to insanity, is, in many instances, very evidently dependent on an *hereditary* peculiarity of organization. Dr. Rush mentions several very striking examples of this kind. Esquirol asserts, that according to his own observations, one half of the cases of insanity among the wealthy, and at least one-sixth of those which occur among the poor, depend on an hereditary predisposition; and according to a tabular statement given by Dr. Casper, it appears that in the different hospitals at Paris, the proportion of cases depending on an hereditary predisposition, is to the whole number as about 1 to 4½. Esquirol states that he has met with an instance of seven sisters and brothers out of one family having been affected with insanity; and Haslam mentions ten families in each of which several cases of mental derangement occurred. Dr. Rush observes, that the following, among other peculiarities attend this

disease, where the predisposition to it is hereditary; 1, weaker exciting causes develop this disease than where the predisposition to it has been acquired; 2, it is apt to come on about the same period of life at which it appeared in the patient's ancestors; 3, children born *previous*, are less apt to become insane, than such as are born *after* the occurrence of mania in their parents, 2, in some instances of families in which madness has existed, the disease passes by the understanding in their posterity and appears in great strength and eccentricity of memory and of the passions, or in great perversion of their moral faculties."

The liability to mental derangement is greatest between the twentieth and fortieth years of age; and according to the observations of Esquirol, still more particularly between the ages of twenty-five and thirty. The following tabular summary in relation to this point, drawn up by Dr. Casper, from the observations of Pinel, Esquirol, Haslam, and others, shows that from the thirtieth to the fortieth year of age, the occurrence of insanity is decidedly more common than during any other equal period of life. During childhood, or before the age of puberty, mania occurs very rarely. Instances are nevertheless mentioned, in which insanity appeared at a very early period of life. Dr. Rush saw two cases in children only two years old; in one instance it appeared during the seventh, and in another during the eleventh year of age. Haslam also relates an instance which occurred in a girl only four years old; in another instance the disease came on in the seventh, and in a third one about the tenth year of age.

Old age, also, is almost equally unfavourable to the occurrence of mania. Dr. Rush states that he has met with but four instances in which the disease came on after the sixtieth year of age. It has moreover been observed, that maniacs rarely live to a very protracted age. Dr. Casper, however, mentions a very remarkable exception to this general fact. A coloured woman, he says, who had laboured under mental derangement for upwards of eighty years, was brought into the Hospital Salpetriere in a state of raving insanity, at the very advanced age of *one hundred and seventeen years*.

In relation to the relative frequency of insanity in the two sexes, it is pretty generally admitted that it is more common in females than in males. Haslam gives a statement from which it appears, that during a period of forty-six years, there were four thousand eight hundred and thirty-two female, and only four thousand and forty-two male lunatics admitted into the Bethlelem Hospital in London. It appears, however, from the inquiries of Dr. Casper, that the proportion of female over male lunatics, is much greater in France than in England.

It is worthy of notice that the predisposition to mental derangement is very generally connected with black or dark brown hair and a dark complexion. Esquirol states that out of two hundred and twenty-seven females affected with mania, one hundred and fifty-two had dark, thirty-nine fair, and thirty-six gray hair. Dr. Rush informs us, that of nearly seventy patients in the Pennsylvania Hospital, who were examined with a reference to this fact, in the year 1810, "all except one had dark-coloured hair." In some regions mental diseases are manifestly *endemic*. This is the case with the *cretins* in many of the gorges of the mountainous districts of Europe: and it would appear that this disease is found only where the soil is *calcareous*.

The exciting causes of mental derangement are usually divided into the *moral* and *physical*; or into those which affect the animal organization thro' the medium of the mind, and those which act directly upon the body.

From the following table it would appear that grief, distress, want, and disappointed love, are decidedly the most common exciting causes of insanity.

<i>Physical Causes.</i>	Salpêtrière, in the years 1811-12.	Esquirol's private hos, 1811-12.	Bicêtre, 1803-13.
Hereditary, - - - - -	105	150	118
Pregnancy, - - - - -	11	4	
Epilepsy, - - - - -	11	2	
Suppressed Menstruation, - - - - -	55	19	
Puerperal State, - - - - -	52	21	36
Old Age, - - - - -	60	4	
Coup du soleil, - - - - -	12	4	
Injuries of the Head, - - - - -	14	4	69
Congenital, - - - - -			
Fever, - - - - -	13	12	157
Apoplexy, - - - - -	60	10	
Malformation of the Skull, - - - - -			9
Fire and other injurious Substances, - - - - -			27
Syphilis, - - - - -	8	1	21
Imprudent use of Mercury, - - - - -	14	18	
Onanism, - - - - -			
Intoxication, - - - - -			106
Worms, - - - - -	24	4	6
Suppressed Cutaneous Diseases, - - - - -			
Suppressed Hæmorrhoids, - - - - -			
<i>Moral Causes.</i>			
Grief, - - - - -	105	31	99
Unfortunate Love, - - - - -	46	25	37
Fanaticism, - - - - -	8	1	55
Fright, - - - - -	38	8	14
Jealousy, - - - - -	18	14	
Anger, - - - - -	16		
Distress and Want, - - - - -	77	14	116
Mortified Pride, - - - - -	1	16	78
Disappointed Ambition, - - - - -		12	
Intense and Protracted Study, - - - - -		13	
Misanthropy, - - - - -		2	49
Vives Révolutions d'esprit, - - - - -			58
Political Causes, - - - - -	14	31	

It is indeed very obvious that those sects which are most accustomed to call up all the human passions, in order to assist the propagation of their doctrines, must be most exposed to the inconveniences which result from the too violent operation of those passions.

SYMPTOMS.

The most common form of insanity is the intermitting, or that in which the paroxysms of the disease are divided by lucid intervals. The accession of the paroxysms is far from being regular, but most usually they begin soon after the summer solstice, continue with more or

less violence during the heat of summer, and terminate towards the decline of autumn. Mania comes on at different periods of life; but in the greater number of cases it makes its first attack between thirty and forty years of age, probably because people at this period are more liable to be acted upon by the remote causes of the disease, or that a greater number of such causes are then applied. At this age people are generally established in their different occupations; are probably married, and have families; their habits are strongly formed, and the interruptions of them are consequently attended with greater anxiety and regret. Under these circumstances they feel the misfortunes of life more exquisitely.

Sometimes mania, however, instead of being only temporary, or occurring in paroxysms, which go off and return again at certain periods, continues during the whole of the person's life without any intermission, and the patient sinks at last under the violence of the conflict, without any abatement of the symptoms; or a state of perfect idiotism ensues.

Although insanity usually breaks out suddenly, the manners of the patient becoming preternaturally impetuous, his conversation hurried, his mind full of projects, which he pursues with restless activity, there are instances where insanity makes its approach gradually: a certain whimsicality of disposition, and waywardness or singularity of character, are observed for some time, perhaps for years, before the individual is set down by his friends as a maniac; and this is particularly the case in hereditary derangement.

In no two patients is the disease ushered in, or continued, with precisely the same appearances; for the different propensities and habits of different patients lead of necessity to a difference of idea and of expression in each. The precursory symptoms of a maniacal paroxysm are, however, very frequent, as follows:—The patient complains of a sense of tightness at the region of the stomach, want of appetite, costiveness, and a sensation of heat in the bowels. He is subject to a kind of uneasiness, which he cannot describe or account for; experiences a degree of fear that sometimes amounts to terror, and feels either little disposition or absolute incapacity to sleep. Soon after these appearances, incoherence and incongruity of idea are betrayed in his outward conduct, by unusual gestures, and by extraordinary changes in the expression and movements of his countenance. He generally holds his head erect, and fixes his eyes and attention upon the heavens. He speaks with a deep hollow voice, walks with a quick and precipitate step, then stops suddenly, as if arrested by the most interesting and profound contemplations. Some maniacs are remarkable for good humour and mirth, which they express by fits of loud and immoderate laughter. There are others again whose taciturnity is perpetual; who express their afflictions by tears, or who sink, without a tear, under the distressing influence of solitary anxiety. This happens in melancholia, to which there are usually added, fondness for solitude, timidity, fickleness of temper, great watchfulness, flatulence in the stomach and bowels, costiveness, and a small weak pulse. Furious madness is marked by severe pains in the head, redness of the face, noise in the ears,

wildness of the countenance, rolling and glistening of the eyes, grinding of the teeth, loud roarings, violent exertions of strength, absurd incoherent discourse, unaccountable malice to certain persons, particularly to the nearest relatives and friends, a dislike to such places and scenes as formerly afforded particular pleasure, a diminution of the irritability of the body with respect to the morbid effects of cold, hunger, and watching, together with a full quick pulse.

Insane persons are said to be usually worse in the morning; but perhaps this is not so generally the case as has been supposed. In many instances, at the commencement of the disease, they are more violent in the evening, and sometimes so the greater part of the night. It is, indeed, well known that the majority of patients of this description have their symptoms aggravated by being placed in a recumbent position. They seem of themselves to avoid the horizontal posture as much as possible when they are in a raving state, and when so confined as that they cannot be erect, will support themselves on the breech.

Of the organs of sense which become affected with those labouring under insanity, the ear has been observed particularly to suffer: few lunatics become blind, but numbers were noticed by Mr. Haslam to be deaf; and those who are not actually deaf, were troubled with difficulty of hearing.

Mania is to be distinguished from phrenitis by the absence of pyrexia and head-ache; and from delirium, by the state of the pulse, and not being conscious of external objects when roused, and even then the person soon relapses into a state of inattention; whereas in mania he is frequently sensible, and is often planning the means of preventing or revenging supposed injuries. A modern writer thinks that insanity is distinguished from delirium by the derangement of the intellectual faculties not being connected with bodily disorder, and that it is this circumstance which constitutes the distinction between the two maladies.

An intermittent fever supervening on madness of long standing has been known in some instances to have proved a cure for the disease; the senses have returned when the fever terminated. When madness has arisen in consequence of some other disorder, and when its attacks are slight, and do not return very frequently, a radical cure may possibly be effected; but when it takes place in consequence of an hereditary disposition, or is attended with great melancholy, and a fixed attention to one particular object, be it love or religion, we should not entertain much hope.—[*Thomas.*]

This variety of mental disorder, partial insanity, (*dementia*.) “consists not in false perception, like the worst grades of madness, but of an association of unrelated perceptions, or ideas, from the inability of the mind to perform the operations of judgment and reason. The judgments are generally excited by sensible objects; but ideas, collected together without order, frequently constitute a paroxysm of the disease. It is always accompanied with great volubility of speech, or with bodily gestures, performed with a kind of convulsive rapidity. We rarely meet with this disease in hospitals; but there is scarcely a city, a village, or a country place, that does not furnish one or more instances of it. Persons who are afflicted with it are good-tempered and quarrelsome, malicious and kind, generous and miserly, all in the course of the same day.”

PROGNOSIS.

Insanity, if there be proper medical treatment, and suitable management, may be cured as well as other diseases. When the paroxysms become less frequent, the mind more quiet, the secretions restored, we may predict a recovery. Symptoms the reverse of this, are unfavourable.

In the Retreat at York, England, out of sixty-six patients cured of insanity, twenty-seven were affected during the first year, thirteen in the second, three in the third, one in the fourth, five in the fifth, three in the seventh, two in the ninth, one in the thirteenth, and one in the fifteenth, (Casper.) Pinel observes, that after three years' ineffectual treatment, the chance of cure in insanity will be about as one to thirty.

DISSECTION.

The morbid appearance most generally to be observed, is an unhealthy state of the brain. There is a determination of blood to the membranes, as well as the substance of the brain itself.

COMMON TREATMENT.

The medical treatment generally pursued in mania, is the same as that in other diseases. It consists principally, in bleeding, blistering, and mercury.

REFORMED PRACTICE.

Indications of Cure.—1. The cure of mental, as well as bodily diseases, is to be effected, first, by reducing the system by suitable evacuations. 2. To create revulsive actions, and finally remove subsequent debility, or feeble morbid actions, by tonics, and stimulating remedies. 3. By the influence of proper moral treatment.

1. *Moral and General Treatment.* It will be necessary in the first place, when the disease is seated, to remove the patient to a place where he will be prevented from injuring himself or others. If he is taken to an insane hospital, it must be one that is properly conducted, not one which is calculated to exasperate the complaint, by the treatment and regulations established there.

2. Much depends upon the conduct of the physician. The practice of some, is harsh, censorious and tyrannical towards lunatics. This conduct is very reprehensible, as it prevents the recovery of the patient. His language should be that of kindness and respect; seldom or never contradicting, or in any respect calculated to wound the feelings. In a word, the law of kindness should be upon his tongue. Acts of justice, and a strict regard to truth are calculated to secure the respect and obedience of deranged patients. Every thing necessary for their comfort, should be provided for them, and every promise made should be strictly and punctually performed.

"As an inducement," says Dr. Rush, "to treat mad people in the manner that has been recommended, I shall only add, that in those cases in which the memory has been greatly impaired, they seldom for-

get three things after their recovery, viz., acts of cruelty, acts of indignity, and acts of kindness.

I have known instances in which the two former have been recollected by them with painful, and the last, with pleasant associations for many years. In gratitude for kindness and favours shown to them, they exceed all other classes of patients after their recovery. A physician once asked a young woman of the society of Friends, whom he had assisted in curing in the Pennsylvania hospital, if she had forgiven him for compelling her to submit to the remedies that had been employed for that purpose: "Forgive thee!" said she, "I love the very ground thou walkest on."

Should not persuasion and kindness be sufficient to produce obedience, it will be necessary to use coercion; but it must be consistent with the greatest kindness. No harsh or severe measures must be taken. Moderation and decision of character must be the watchword.

The means generally made use of to confine those lunatics who are unmanageable, is the straight-jacket: but this has been condemned, particularly by Haslam, who employs instead of it, a belt from eight to ten inches wide. This is passed round the lower part of the body, and fastened on the back by strong buckles. On each side, leather bags are fastened, into which, the hands of the patient are thrust, and secured by proper bandages. By this, the pressure usually occasioned by the straight-jacket is avoided, and it is preferred, or borne with less restraint. It is said that in Dubuison's private institution, an armed chair is used as a mode of coercion. It consists of an armed chair, with a high back, and foot-board: the arms, legs, feet, and body, are fastened to this chair by strong and broad straps furnished with buckles.

This is an excellent contrivance to secure deranged patients in paroxysms of the complaint. Some have recommended total darkness in such cases; but the expediency of this measure is very doubtful.

"In the furious state, insane patients," says Dr. Rush, "should never be contradicted, however absurd their opinions and assertions may be, nor should we deny their requests by our answers, when it is improper to grant them. In the second grade of the disease, we should *divert* them from the subjects upon which they are deranged, and introduce, as it were accidentally, subjects of another and of an agreeable nature. When they are upon the recovery, we may *oppose* their opinions and incoherent tales, by reasoning, contradiction, and even ridicule."

Sometimes threatening the patient with some kinds of punishment, will tend to tranquillize them; but kindness and soothing treatment, will be found the most sovereign remedy.

Amusements.—Various kinds of amusements have a tendency to benefit insane persons. Such as are pleasing must be recommended. Reading interesting books must be recommended, also, writing, copying, &c.

"Committing entertaining passages of prose and verse to memory," says Dr. Rush, "and copying manuscripts, have been found useful in relieving hypochondriasm. They divert and translate attention and action from the understanding to a sound part of the mind. Reading aloud has nearly the same effect.

Dr. Burton recommends, in the highest terms, the reading of the bible to hypochondriac patients. He compares it to an apothecary's shop, in which is contained remedies for every disease of the body. I have frequently observed the languor and depression of mind which occur in the evening of life, to be much relieved by the variety of incidents, and the sublime and comfortable passages, that are contained in that only true history of the origin, nature, duties, and future destiny of man. A captain Woodward, of Boston, who lately suffered all the hardships of shipwreck on an inhospitable island in the East-Indies, found great comfort in revolving the history of Joseph and his brethren in his mind. A captain Inglefield revived his spirits, and those of his crew, in a similar situation, by telling them pleasant stories.

Music has a tendency to tranquillize the mind, and may be practised. Mr. ***** has left the following testimony in its favour. "Next to theology, I give the highest place to music, for thereby all anger is forgotten; the devil, also melancholy, and many tribulations and evil thoughts are driven away." For the same reason that tragedies afford more relief than comedies, plaintive tunes are more useful than such as are of a sprightly nature. I attended a citizen of Philadelphia, occasionally, in paroxysms of this disease, who informed me that he was cured of one of them by hearing the old hundred psalm tune sung in a country church. His disease, he said, instantly went off in a stream of tears. Dr. Cardan always felt a suspension of the anguish of his mind from the same cause; and Mr. Cowper tells his friend, Mr. Hayley, in one of his letters, that he was "relieved as soon as his troubles gushed from his eyes." The tears in these cases acted by indirectly depleting from the brain.

Interesting Scenery.—Perhaps nothing contributes more to the recovery of insane patients, than interesting scenery. Therefore an institution for this unfortunate class of our fellow beings, should be located in the most delightful, pleasant, and romantic section of the country, and especially by the side of the ocean, lake, or large beautiful river, or sheet of water. In a word, he should be placed in the midst of all the beauties of landscape combined, pleasant grounds and walks, groves, and flower gardens. A house should be placed in the midst of this scenery, having all the appearance of a private residence, and without any thing to create an idea in the mind respecting a hospital or public institution, and the internal affairs of which should correspond with the external. The rooms should be large and convenient, with suitable furniture, and should be superintended by the most humane, kind, discreet, and judicious persons, and every means should be made use by them to impress upon the minds of the deranged inmates, that they are in the midst of a private house, and domestic circle, among those who take the greatest interest in their welfare and health, or those who are their best friends. How different such a situation from some of the hospitals, where the insane are now obliged to resort. They are more calculated to render people "crazy," than cure them of it.

It has been the practice to force them into narrow, cold, and dismal cells, put on the straight-jacket, or confine them to the floor by large iron chains, in addition to which, they have been obliged to submit to

corporeal punishment, abuses, &c. and treated more like brutes than human beings.

Nothing will supply the place of the scenery, and kind treatment above spoken of. An opposite course will produce gloominess and despondency, and is calculated to aggravate, rather than cure insanity. How enlivening, how well calculated to cheer the desponding spirit, would be a situation with such advantages, especially when connected with proper nursing, diet, exercise, amusements, kind treatment, cheerful friends, with the administration of suitable medicine. A *water prospect* is inconceivably important, and should by no means be omitted in a site or situation of this kind. It has the most salutary, cheering, and permanently good effects. Sailing and fishing is also good employment.

Those who are insane, should be kept apart as much as possible, lest one contract an additional degree of insanity from another.

Employment.—Every insane person should be employed about something. It is calculated to concentrate the mind upon one object, and dispel gloomy sensations. Females may be engaged in various kinds of domestic concerns, while males should attend to gardening, farming, or mechanical occupations.

Exercise.—This in part will be sufficient for exercise, where patients can be prevailed upon to practise it; but where they are unable to follow any kind of employment, they must be often compelled to walk or ride out.

This, by restoring the secretions, and giving tone to the system, strengthens the nerves, diverts the mind, and thus has a tendency to remove the complaint.

Travelling.—Travelling is often attended with a happy effect. A change of air benefits the patient, as well as the constant change of scenery. Many persons have been entirely cured by it.

Medicine.—It is not necessary in general to give much medicine in mania; but that which is suitable may be given with advantage. Even supposing that the first cause of the disease exists in the mind, such is its influence upon the body, that it is thrown into disorder or derangement. There is usually a morbid condition of the stomach, liver, and alimentary canal. Hence purgatives should be occasionally administered; and where there is habitual costiveness a *laxative pill* should be given at night. The body should be frequently bathed with ley water, to divert the blood from the centre to the surface, and thus *equalize* the circulation; the feet must also be repeatedly bathed with the same, and sinapisms applied to them. When there is considerable febrile excitement, or a determination of blood to the brain, a *mustard plaster* may be placed between the shoulders, and the *diaphoretic powders* given at bed time.

In a paroxysm, and when there is wakefulness, and the patient unable to sleep, administer a dose of the *hyoscramus*, or *henbane*, from half a dram to a dram may be given at a dose. The saturated tincture of *hops* is also an excellent medicine to allay irritation and procure sleep. When the nerves are very irritable, and there is great debility, with little or no fever, tonics may be given, and none will be found better than the *restorative cordial*.

Bathing.—The patient must use the *tepid bath* occasionally, and particularly the *shower bath*. They divert the blood from the head and give tone and energy to the brain. In conclusion, I will add a short account of a private institution established in England some years ago, by Dr. Willis. It is worthy of imitation:

“Dr. Willis lived at Greatford, in Lincolnshire, and he there had one of the largest private establishments in the kingdom for the reception of lunatics. His house was pleasantly situated, with grounds and plantations neatly laid out around it, where his patients could enjoy salutary exercise, and have interesting natural objects continually before their eyes. Some of those entrusted to his care were distributed in the neighbouring villages, with proper attendants to wait upon them and overlook their conduct. An asylum in the country is much more adapted ‘to heal the wounded spirit,’ and to correct the morbid trains of thought, than a crowded hospital in the midst of a large town.—The calm retreat, the multitude of agreeable objects, the kind and benign aspect of the physician, his constant superintendence, the select society of strangers in similar circumstances, the fear of being put to shame, must all have a favourable effect in promoting the cure.”

“From what can be gathered from the few sources of information to which we have access, the patients at Greatford were treated like human beings; they were managed like children, and not shut up or chained down like wild beasts. Moral means were principally trusted to, yet physical ones were never neglected. The patients were taught to fear and to love their physician; they were admitted to breakfast, and dine with him; and in the company of others, as long as they behaved well, and could restrain their feelings; whenever any one transgressed the rules of good behaviour, the strait-waistcoat was employed as the badge of disgrace. No chains or bandages were ever made use of, and the strait-waistcoat only in cases of extreme necessity. One of the principal means he employed was to have the attendants or keepers always appear as servants to the lunatics, appointed to wait upon them and to supply all their wants; but the servants were under the controul, and received instruction from their master, the physician, which they dared not, on any account, disobey, and they could not allow any orders to be infringed against without permission. Besides relieving the attendants from a disagreeable situation, this served to give the patients a very high idea of the power of their physician, of whom they never can be brought to think too highly: they ought to feel that their fate rests in his hands, and that no person in the world is of greater consequence than he who has the management of their health.”

“Of physical remedies, emetics were most preferred by Dr. Willis. Opium, he thought, did harm, and when narcotics were required, he employed hyosciamus. Blisters on the neck he found hurtful. When the strength of the body wanted to be increased, he gave the Peruvian bark, and he used this in large quantities. Digitalis was considered serviceable in some cases. Dr. Joseph Frank learnt thus much in conversation with Dr. John Willis, and one other fact, which is of some importance, viz, that Dr. Willis had never observed any thing peculiar in the formation of the skull among his patients.”

“Various objections are raised against sending a madman to a place of confinement, even among the highest and lowest classes of society. A principal one is the fear of severe and cruel treatment, and the hazard of making the disorder permanent; but these apprehensions are groundless; for there must be some grievous defect in the mode of correcting the disordered mind, if correct sentiments and rational and orderly behaviour, are not inculcated by the habit of self-denial, and strong efforts of the will. Let the appeal be fairly made, by visiting a maniac at his own house, or at a large establishment appropriated for the reception of such persons. Patients, in general, not only more orderly, but more rational and tractable than those in a private house, where the continual fluctuations of temper and apprehension among friends, lead alternately to improper indulgence or undue severity. Such treatment will both confirm the morbid associations, and enervate the natural character, just as sullenness and ill-humour are the natural consequences of irregularity and inattention in the early part of life. If great advantages are derived from lunatic hospitals, (imperfect as they have hitherto been, and little as their managers in general understand the art of forming the characters of their patients,) how beneficial may they become under the direction of a benevolent physician, who, instead of confining his efforts merely to make the noisy quiet, and the sullen to eat and speak, labours with redoubled attention to rectify the disorders of the several powers of the mind, to excite its healthy action, and by the fine, yet simple contrivance of making a society or school of their own, exhibits the interesting sight of the melancholic gaining health and spirits, and the maniac restored to take his station again in the extensive society of the world? Such seems to have been the plan of the late Dr. Willis, and the number of those who have recovered under his care, will best testify how well he reduced such a plan to practice.

REGIMEN.

A light and nutritious diet should be given. Such medicines as create wind should be avoided. The room should be kept quiet, and no instruments left through which suicide can be committed.

CHAPTER II.

NYPHOMANIA, OR FUROR UTERINUS.

DESCRIPTION.

By this disease we understand an inordinate desire in females for coition, sometimes amounting even to insanity or mania.

SYMPTOMS.

Lieutaud describes this disease so accurately, that I shall here transcribe it:

“Furor Uterinus or Satyriasis, as every one knows, is an insatiable desire of coition, in which both virgins and women who have entered the camp of Venus, rush intemperately to the embraces of men, which being denied, they suffer frequent pollutions, as well waking as sleeping, or sport in imaginary gratification. That species of salacity differs much from *furor uterinus*, which depends on the amazing size of the clitoris, (which when excited by lust, or affected with stiffness, seems to resemble the male organ; whence those lascivious women called *tribades*, endeavour to force others of the same sex with whom they are in love, and not without abominable pleasure, are able to perform an addle species of the office of a man. To return to our subject: *furor uterinus* is not always manifested by obscene discourse and indelicate actions, since many who are not free from shame and bashfulness, endeavour to conceal this most vile situation, and conscious of its turpitude, try to repress this abominable lust. Women of a sanguinous temperament are thought prone to satyriasis, virgins who are ripe for husbands, or women living in gratification of their lusts, and in luxury; widows, or those who are married to frigid old men; nevertheless this affection spares not other ages, since there are examples of some women about the sixtieth or seventieth year of their age, seized with this most filthy disease. Mention is also made of a little girl three years of age, afflicted with this hereditary affection. Obscene books, conversations or thoughts promote this disease; very nutritious and acrid food, and especially the frequent use of *masturbation*; (a practice similar to *onanism*.) Satyriasis is rarely dangerous, and yet often suffers such great exacerbations, that women who cannot be gratified with venery are seized with fury; they solicit all whom they meet to venereal embraces, and attack those that refuse with fists and nails; perpetually handling their privates with their wanton fingers, until they become maniac, and are forced to be confined with chains lest they do violence to themselves or the by-standers. The dead bodies exhibit the uterus inflamed, the clitoris much enlarged, the tubes and ovaries variously diseased, namely, inflamed, suppurated, having fatty excrecences, hydatids, schirri, &c. The kidneys are also found of stupendous magnitude, &c.

TREATMENT.

1. Let purgatives be administered to reduce the system.
2. Let refrigerant applications be applied to the organs of generation, and over the pubis.
3. Occasionally let *anodynes* be given.
4. Let the patient be restricted to a low diet.
5. Let the patient avoid the company of men.

CHAPTER III.

MELANCHOLY. (*Melancholia*.)

DESCRIPTION.

MELANCHOLY, is a low kind of delirium, with a fever; usually attended with fear, heaviness, and sorrow, without any apparent occasion. Or, as some define it, a disease which consists in the perturbation or injury of the imagination, which prevents it from forming a regular and determinate idea of things, as at other times; so that its due operations are interrupted, and often second ideas, having no connection with the first, crowd in, and are succeeded by actions no way analogous or similar to the first idea, and therefore appearing irrational.

This malady has essential differences, on account of the causes from which it is produced. In some people, it seems wholly to depend upon a false judgment of things in the mind; and in this case it is usually habitual and incurable. In others, it arises from injuries of the body; and in these it always is observed to bear a proportion to the injury or debility of the parts. This peculiar species is called hypochondriac melancholy; and finally, in others, it seems of a mixed nature; as when it has taken its origin from disease in the body, but is afterwards so increased by mental disorders, that even after the total removal of the corporeal ones, it still remains in all its force upon the mind. This is a too common and a very unhappy case.

CAUSES.

It may proceed from an hereditary disposition, melancholic temperament, depressing passions or affections of the mind, great and affecting disappointments, suppressed evacuations, intemperance, and injuries of the cranium. Sometimes it is occasioned by a sedentary life, and solitude; and by acute fevers, or other diseases. It is sometimes the effect of excessive venery; and is frequently produced by gloomy and fanatical notions of religion.

SYMPTOMS.

‘In this disease,’ says Dr. Temple, ‘the patient shuns society, and courts solitude, is fearful and low spirited, and these symptoms are frequently observed for some time before an actual derangement is perceived. He indulges a certain train of thoughts upon one subject, and generally fixes upon that which was the cause of his misfortune, if it has been brought on by any sudden and violent affection of the mind. The face is generally pale, the urine is small in quantity and watery, the patient is generally costive, and the stomach affected with flatus or wind; and in some cases, so miserable are the feelings that the unfortunate wretch seeks every opportunity of putting an end to them, by terminating his existence.’

To these symptoms, the following may be added; the patient is fretful, fickle, capricious and inquisitive; solicitous about trifles, and alternately niggardly and prodigal: he has a distaste and dislike to every thing, even before it comes in sight, and frequently weeps for imaginary causes, or for no cause at all. Many people, in this case, seem always to want room; they are for opening all the windows they can, and for running out into the streets or fields, thinking themselves every where imprisoned; others leave their houses, and dread being taken up for capital offences, though never guilty of any: and in others these symptoms of the mind are evidently joined with those of the body, such as palpitations of the heart, deep sighs, and painful breathing.

This disease is varied an infinite number of ways, according to the temperament and ideas of the person affected with it. It is a species of madness and only differs from a downright mania in degree.

If it arises from suppressed evacuations, or any bodily disorder, there are greater hopes of a cure than when it proceeds from the mind. In these cases a looseness, hæmorrhage, or eruption sometimes carries off the complaint. When it is hereditary, a cure is scarcely to be expected.

If the patient begins to enjoy sound refreshing sleep; if the mind can be easily diverted from its accustomed train of reflections, and becomes capable of lively impressions, a recovery may be hoped for.

There is a lower species of melancholy, called low-spirits, to which persons of weak nerves are more or less subject. Generous diet, the cold bath, exercise, and amusements, are the most likely means to remove this complaint. It is much increased by solitude, and indulging gloomy ideas, but may often be relieved by cheerful company and proper amusements.

TREATMENT.

In the treatment of melancholy, attention must be directed to the mind as well as the body. The patient should be amused with a variety of scenery: should take plenty of exercise in the open air; such as riding, walking, gardening farming, &c. He should peruse interesting books, and converse with cheerful friends, and above all should be located in pleasant scenery where he can enjoy a water prospect; a country air, and country diet: he should use the shower bath often, after which the whole body should be rubbed with flannel. He should occasionally take a mild *Emetic*, gentle *Laxatives*, and *Restorative bitters*.

The diet should be principally vegetable, but not those which produce flatulence. He may use milk if it agrees with him, and eat fruit, after it has been cooked.

CHAPTER IV.

EPILEPSY OR FALLING SICKNESS. (*Epilepsia.*)

DESCRIPTION.

EPILEPSY, called also falling sickness, is a sudden privation of sense, accompanied with unusual motions and violent convulsions of the whole system. It occurs in paroxysms, which, after a period, leaves the patient nearly in his former state, but generally it is succeeded by languor, debility, stupor, and drowsiness. It occurs more frequently among young children than grown. It occurs also periodically, and oftener in the night than in the day-time. It is frequently an hereditary disease, attacking several in the same family.

DISCRIMINATION.

The only disease with which epilepsy can be confounded, is hysteria, and from this it may readily be distinguished, by the foaming at the mouth, gnashing of the teeth, blackness of the countenance, &c. together with the speedy termination of the fit in sleep, and the absence of the usual symptoms of hysteria, such as the globus hystericus, palpitations of the heart, involuntary laughing or weeping, and other symptoms usually described in the histories of that disease.

CAUSES.

The causes which give rise to epilepsy are blows, wounds, fractures, and other injuries done to the head by external violence, together with plethora of the vessels of the head, of water in the brain, tumours, concretions, polypi, and a deformity in the shape of the bones in any interior part of the skull. Epilepsy has also been known to arise from an affection of the spinal marrow; and it is to inflammation in that part, of a more chronic form, that those shaking palsies, which are attended with pain, have been imputed. Violent affections of the nervous system, sudden frights, fits of passion, great emotions of the mind, frequent intoxications, acute pains in any part, worms in the stomach or intestines, teething, the suppression of some long-accustomed evacuation, too great emptiness or repletion, and poisons received into the body, are causes which likewise produce epilepsy. Sometimes it is hereditary, and at others it depends on a predisposition arising from a mobility of the sensorium, which is occasioned either by plethora or a state of debility.

Derangement of the stomach and bowels, is a very frequent cause of this complaint.

We are told by Dr. Parry, that whatever may be the primary cause of epilepsy, it usually depends immediately on excessive impetus of blood in the vessels of the brain.

“Epilepsy,” says Gregory, “is in some instances dependent upon a *primary* morbid condition of the brain, and totally *independent* of disturbed function of the abdominal viscera. Like the preceding variety, cerebral epilepsy is of two kinds; the one connected with *functional*, the other with *structural* disease of the brain and nervous system.

The obscurity which attaches to the functions of the brain and nerves, makes it impossible to speak with any precision on that difficult point in the pathology or nature of epilepsy; but a variety of arguments might be adduced to show, that there exists primary functional disturbance of the brain, leading to the epileptic paroxysm. The hereditary predisposition to the disease; the absence of all appearances after death, excepting such as are common to other forms of chronic disease of the brain; and the recurrence of the fits at irregular periods, and particularly at night are strong confirmations of this doctrine. To these we may add the peculiar character of many of the *exciting* causes of the fit, violent mental emotions, irritation, and the operation of certain poisons, both of the narcotic and morbid kind. Arsenic and the muriate of barytes have been strongly suspected of inducing epilepsy. In children a common effect of the poison of small-pox is an epileptic paroxysm.

It is impossible to overlook the fact, that in a very large proportion of the cases of cerebral or idiopathic epilepsy, and in many of those which are manifestly connected with disturbed function of the bowels and uterus, there is preternatural fulness in some parts of the vascular system of the brain. This is an important feature in the pathology of epilepsy.

The grounds on which we establish the connection of epilepsy with a state of congestion or over-distention of the cerebral blood-vessels, may be thus briefly enumerated. Epilepsy occurs in persons of full habit of body, and indolent mode of life; the fit is frequently preceded by headache, flushings of the face, and throbbing of the carotid and temporal arteries; it is brought on, in many cases, by great muscular exertion, as in parturition, by stooping, intoxication, heated rooms, and above all by violent fits of coughing, such as occur in severe hooping cough. The hysteric form of the disease is only one of those many consequences of obstructed menstruation of which the prevailing character is irregular determination of blood.

While I thus express myself on the subject of epilepsy, as connected with turgescence of vessels, I am not insensible to the fact, that paroxysms of *convulsion* are occasionally connected with a state of cerebral circulation, directly the reverse; as when we see them following large bleedings at the arm, double amputations, or excessive purging. Dr. Cullen, indeed, appears to have overstrained his favourite theory of epilepsy from *collapse*, but it must not be on that account excluded from our reasonings.

The last point which requires consideration previous to entering on the subject of treatment, is the connection of epilepsy with chronic disorganizations of some one of the structures within the cranium. Those which authors have most usually noticed as producing epilepsy, are spicula of bone detached by some injury from the internal table of the skull; ossifications of the falx; tumours of various kinds, at-

tached either to the bones, membranes, or substance of the brain; and lastly, foreign bodies lodged there. Numerous cases are to be found on record, of epilepsy from these and similar causes; but instead of pressing them on the notice of the reader, I would rather wish him to understand how rare they are in comparison of those which are simply the result of *morbid action*, in many of which we may reasonably hope, by judicious measures and steady perseverance, to produce an alleviation, and even, in a few, the permanent cure of the disease.

SYMPTOMS.

The epileptic fit for the most part occurs suddenly. The patient falls to the ground; and the disease has hence received the appropriate name of the *falling sickness*. When the complaint is fully established, it is usual for the patient to experience certain warnings of the approach of a fit, which though lasting only a few seconds, enable him to make some preparations for it. The most frequent of these warning symptoms are head-ache, giddiness, dimness of sight, or flashes of light passing before the eyes, ringing in the ears, and coldness of the extremities. Some persons are apprised of the approach of the fit by the appearance of particular spectres; but the most common of all epileptic warnings is that singular sensation of tremor, or coldness, or numbness, which has been called the *aura epileptica*. It begins at the extremity of a limb and gradually ascends to the head, when the paroxysm of lethargy and convulsion ensues.

During the fit the convulsive agitations of the body are violent. The eyes are fixed and reverted and the pupils permanently contracted; the teeth gnash against each other; the tongue is thrust forward, and often severely bitten, and there is foaming at the mouth; the breathing is irregular and laborious, and the pulse for the most part small and contracted. Complete insensibility prevails. The fit varies in duration, from a few minutes to a quarter or even half an hour. In some cases it has lasted even longer. On its cessation the patient remains for some time motionless, insensible, and apparently in a profound sleep. From this he recovers by degrees, but without any recollection of the circumstances of the fit. It leaves him weak and exhausted, and for the rest of the day he generally complains of a degree of stupor and sense of oppression in the head. In many cases this has amounted to actual *mania*, continuing for two or three days.

The periods of recurrence of the fits are too various to admit of being stated with any degree of accuracy. When the disease first develops itself, the intervals are long, perhaps two or three months. As it becomes more firmly rooted in the system, the fits recur with a corresponding frequency, until at length the patient hardly passes a day without one. It is important, however, to bear in mind, that genuine epilepsy never occurs oftener than this; and therefore, when a person has more than one fit in the day, we may reasonably conclude that the disease is of an *hysterical* nature.

Epileptic fits occur at all hours; but much more commonly during the night than in the day; sometimes on first going to sleep; but more usually, as far as my own observations extend, on waking in the morn-

ing. It is reasonable to conclude that there is some peculiarity in the state of the brain during sleep, which is highly favourable to the development of the epileptic paroxysm.

It has been noticed by authors, that some degree of consciousness is occasionally preserved in the genuine epileptic paroxysm; but such an occurrence is very rare, and seldom permanent, proving only a prelude to the total abolition of sense. In a few cases the recovery from the fit has been as sudden as the seizure; nor are the succeeding headache and stupor observed invariably.

Such are the more common modifications of the epileptic paroxysm. In whichever way the disease manifests itself, it goes on to produce other and more serious injury to the constitution. In the first place, the mental faculties become gradually and permanently more and more impaired; the memory fails, and a state of mind closely verging on idiotism is at length brought on. In almost all epileptics a vacant expression of countenance is observable, which once seen cannot easily be forgotten.

Epilepsy, when once thoroughly rooted into the habit, will generally be found to bring on, sooner or later, some other form of cerebral disease—hydrocephalus, mania, apoplexy, or palsy. The complication of epilepsy with mania is at once the most frequent and the most formidable. Of one of these, in most instances, the epileptic patient dies; but it is not to be overlooked, that epilepsy sometimes terminates, in the third place, fatally and suddenly, without inducing any secondary affection. This, though seldom witnessed among adults, is not uncommon in the epilepsy of children; and assuredly it cannot be a matter of surprise; it can only lead us to reflect, how wonderful must be the structure of that delicate system, which can resist, in ordinary cases, the repeated attacks of so dreadful a disease, and how little pathology can assist us in unravelling such a mystery.

Epilepsy is generally considered as equally frequent in both sexes. It is considerably more prevalent among females than males; and the fact, if correct, may be attributed partly to the greater *mobility* of habit in the female sex, and partly to the peculiar character of the *exciting* causes of the disease. These constitute, in fact, the most interesting points in the pathology of epilepsy. I may begin by noticing the connection of epilepsy with a deranged state of the natural functions, constituting the *epilepsia occasionalis* of Dr. Cullen; and then proceed to show how it depends, in other cases, upon some primary morbid condition of the brain. This latter variety of the disease Dr. Cullen has designated by the title of *epilepsia cerebialis*.

The symptomatic or *occasional* epilepsy is of two kinds;—the enteric, or that which is connected with disturbance of function in some portion of the alimentary canal; and the hysterick, or that which has its origin in disturbed functions of the uterus. Speaking generally, we may say, that the first is peculiar to children under the age of fourteen; and the second to women between the ages of fourteen and twenty.

The first source of that irritation in the alimentary tract which leads to epilepsy, is painful dentition. It is a fruitful cause of the diseases of children, and of none more commonly than of epileptic fits. The se-

cond is acidity in the stomach, its distention by wind, or the mere detention in it of crude and undigested aliment. In infants of high natural irritability of frame, these disordered conditions of the stomach frequently lead to paroxysms of convulsion; and in many cases they recur, and otherwise exhibit all the characters of perfect epilepsy.

At a somewhat more advanced period of life, there is no kind of irritation which so commonly proves the source of epileptic fits, as the presence of *worms* in the intestinal canal; but almost any disorder of the bowels will, in certain habits and states of body, bring on a tendency to convulsion. The phænomena of cholera morbus will at once suggest themselves as an illustration of this pathological principle. The prognosis, in all the forms of enteric epilepsy, is naturally more favourable than in any other variety of the disease; because the source of irritation is both more obvious, and more under our control.

The hysteric epilepsy is an equally frequent and much less manageable kind of disorder. It prevails extensively among the most delicate of the sex, at the most interesting period of their lives, often resisting the most active and judicious treatment, and degenerating into that permanent and almost incurable form of cerebral epilepsy which we are next to notice. Hysteric epilepsy commonly affects females about the commencement of the catamenial epoch, or shortly afterwards, when the flow is scanty and difficult. Occasionally it takes place at a later period of life, in accidental obstructions of the menses. It chiefly prevails among those of sanguine temperament, with full development and vigorous action of the circulating system, and a delicate irritable constitution. There is nothing peculiar in the character of the fits of hysteric epilepsy, except that their recurrence frequently corresponds with the regular catamenial periods. [*Gregory.*]

PROGNOSIS.

When the disease arises from an hereditary disposition, or comes on after the age of puberty, or where the fits recur frequently, and are of long duration, it will be very difficult to effect a cure; but when its attacks are at an early age, and occasioned by worms, or any accidental cause, it may in general be removed with ease. In some cases, it has been entirely carried off by the occurrence of a fever, or by the appearance of a cutaneous eruption. It has been known to terminate in apoplexy, and in some instances to produce a loss of the powers of the mind, and to bring on idiotism.

DISSECTION.

The appearances usually to be observed on dissection, are serous and sanguinous effusion, a turgid tense state of the vessels of the brain without any effusion, a dilatation of some particular part of the brain, excrescences, polypi, and hydatids, adhering to it, and obstructing its functions, and likewise ulcerations.

COMMON PRACTICE.

Bleeding, arsenic, mercury, lunar caustic or nitrate of silver, oxide and sulphate of zinc, sulphate of copper, ammonicated copper, sulphate of iron, ammonicated iron, &c.

REFORMED PRACTICE.

During the epileptic paroxysm in general, little or nothing is to be done, except using precautions, that the patient may not injure himself; and it will be prudent to remove any thing which may compress the veins of the neck, to obviate congestion in the head.

Indications of Cure.—1. To remove all sources of irritation.

2. To moderate the afflux of blood upon the brain.

3. To alter that morbid condition of the nervous system, on which convulsion depends; and to strengthen the body.

To one or other of these principles may be traced the good effects of all the medicines and plans of treatment which prove efficacious in the cure of epilepsy. They are far from being incompatible with each other. On the contrary, it is often necessary to combine them all in the management of an individual case.

In the epilepsies of infants and children, much may be done by scarification of the gums; by the administration of an emetic; by occasional smart doses of purgative medicines; by the more liberal use of mild aperients and tonics; and by strict attention to diet and regimen. Where the concomitant symptoms afford evidence of the presence of worms, anthelmintics are of course to be exhibited.

When the irritation is seated in the uterine system, as manifested by the concurrent symptoms, (scanty and laborious menstruation, and the peculiar periods at which the fits recur,) our measures must in part be directed to restore the natural determination to the uterus. Recourse may be had to the warm hip bath, stimulating injections, relaxing medicines, diaphoretics, and the different kinds of *emmenagogues*.

The second principle in the treatment of epilepsy is the obviating general plethora, and the taking off that peculiar determination of blood to the vessels of the head, which is one of the most important features in the pathology of the disease. Such a principle is equally applicable to the sympathetic as to the primary, or cerebral varieties of epilepsy. Where the disease is still recent; where it occurs to adults and young persons of robust habit; and more especially where, in the intervals of the fits, the patient complains of head-ache, giddiness, stupor, or any other mark of permanent fulness in the blood-vessels of the brain, *Purgatives* and *sudorifics* must be given. It may even be necessary to repeat it, before the tendency to accumulation of blood about the head can be thoroughly subdued.

Keeping the same important object in view, the practitioner will aid the effects of medicine by directing a mild and unirritating diet, early hours of rising and going to bed, regular exercise, abstinence from all fomented liquors, and cold washing of the head and neck. Under particular circumstances, he will substitute cupping between the shoulders, *mustard plasters* to the nape of the neck, and the steady use of purgative medicines.

The physician will attempt to alter that peculiar condition of the brain and nervous system with which the state of convulsion is associated. Experience has shown, that medicines of the *narcotic* kind possess a considerable power over it. Many of them have accordingly been employed in epilepsy, and with advantage; more particularly

camphor, opium, hyoscyamus, and stramonium. Further; there are the strongest grounds for believing, that the morbid irritability of the brain and nerves, on which spasm depends, is often connected with general constitutional *weakness*. Hence it is, that many of the most powerful of the *anti-spasmodic* medicines are in fact *tonic*.

Medicine.—Having detailed the general indications, and principles of cure, I shall now speak of the administration of particular kinds of medicine.

1st. Emetics.—The stomach being either primarily or secondarily affected in this disease, it will be necessary to administer a stimulating emetic—either the pulverized *Lobelia* plant, or the seeds may be given, and repeated once or twice a week according to circumstances. From the extensive influence of this plant on the system, it is better adapted to diseases of this kind than any other kind of emetic. It stimulates the stomach, liver, pancreas, brain, and whole nervous system, and usually brings on more or less perspiration.

2d. Moderate purgatives should also be occasionally given to cleanse the first passage, and intestines. Afterwards laxatives, or aperient medicines may be taken, sufficient to keep the bowels regular.

3d. Antispasmodics must be given. The following I have found preferable to any other.

Take seeds of Stramonium, (*Datura Stramonium.*) pulv. 1 Drachm.
Spirits, . 4 Ounces.

Digest until the strength is extracted. Of this tincture, let 20 or 30 drops be taken three times a day in a little tea or any suitable vehicle. The dose may be increased until there is a slight degree of dizziness, when the dose should be continued the same.

Tonics.—I have found by experience, that the Epilepsy is a disease of general debility or weakness. Indeed it seems to be the proximate cause of the complaint, and I have therefore always found the most benefit from such medicines as have given the most tone and energy to the system.

The following formula combines anti-spasmodic and tonic properties :

Take Garden Pæony (*Pæonia Officinalis*) 1 oz.
Peruvian Bark (*Cinchon Officinal*) 1 oz.
Virginia Snake Root (*Serpent. Virginian.*) 1-2 oz.
Wild Valerian, or Ladies' Slipper 1 oz.

Extract all the strength of these by repeated boilings, then strain and simmer to one quart, add a pound of loaf sugar, and half a pint of Madeira Wine. Of this, the patient may take from half a wine glass to a wine glass three or four times a day fasting.

Shower Bath.—The patient should use the shower bath three or four times a week, after which, the body should be thoroughly rubbed with flannel. Should the above means fail to cure the disease, the *Restorative Cordial* and the *Wine Bitters* may be alternately used.

REGIMEN.

It is necessary to diet in Epilepsy; and it should be light and nu-

tritious. Ardent spirits should be avoided, all fatigue, and every thing calculated to excite the passions.

Dr. * * * * *, of Connecticut, was cured of this disease by pursuing a rigid course of diet. He avoided all fat and greasy substances, and observed Franklin's rules to rise from table with a desire for more food.

Epileptic patients ought to breathe a free and pure air. Exercise is likewise of great use, but the patient must be careful to avoid all extremes of heat and cold; all dangerous situations, as standing or working upon houses, precipices, or near deep waters, rivers, &c. lest a fit should happen to come at the time, and they be precipitated to the ground.

CHAPTER V.

APOPLEXY, (*Apoplexia*.)

DESCRIPTION.

APOPLEXY is a sudden privation in some degree of all the senses and motions of the body, except those of the heart and lungs, attended by stupefaction and sometimes snoring. The disease is usually divided into two species, the *sanguinous* and *serous*: the first is caused by the blood distending the vessels and thereby compressing the brain, or by an extravasation of blood in consequence of the rupture of a vessel; the second arises from a collection or effusion of a serous fluid in the cavities of the brain.

Apoplexy makes its attack chiefly at an advanced period of life; and most usually on those who are of a corpulent habit, with a short neck, and large head; and who lead an inactive life, make use of full diet, &c.

CAUSES.

The predisposition to apoplexy has attracted much attention from medical authors, and many contradictory opinions have been brought forward concerning it.

1. The tendency to apoplexy is given, in the first place, by certain *conformations of body*. The apoplectic *make* has been remarked, indeed, in all ages. A large head, a short thick neck, a florid complexion, broad shoulders, short stature, with a tendency to corpulency, are the prominent features of the apoplectic figure. Nevertheless, apoplexy is sometimes met with in spare subjects with pale countenance. Peculiarity in the formation of body being often hereditary, a tendency to the disease may naturally be expected to prevail in particular families; but independent of this, there may exist a constitutional tendency to disease of the head, the knowledge of which will materially as-

assist in forming a right judgment on the origin and probable tendency of particular symptoms.

2. The predisposition to apoplexy is connected, in the second place, with a certain *period of life*. Hippocrates said, that apoplexies were chiefly generated between the fortieth and sixtieth year; and Cullen further remarks, that as life advances, the tendency to this disease increases. There is no doubt that in early life it is rarely met with; but it is far from being uncommon between the twentieth and thirtieth year. By many pathologists it has been held, that the greater liability to the disease at an advanced period of life, is owing to an ossified or otherwise diseased state of the coats of the cerebral arteries; which is stated to be then of frequent occurrence. It is supposed to give increased facility to extravasation within the brain, just as the same morbid structure in other parts is imagined to lead to aneurism. There is probably, some foundation for this opinion, though it may have been pushed too far by certain of its supporters. While we are ready to acknowledge, then, that the rupture of a blood-vessel within the brain may sometimes be connected with a diseased state of the coats of the arteries, we must not, on the other hand, forget, that, in probably a larger proportion of cases, it is merely the result of a *morbid action* of vessels, analogous to that which takes place in hæmoptysis.

3. A predisposition to apoplexy is further given by such *habits of life* as tend to produce plethora generally, to drive the blood in more than ordinary quantity upon the vessels of the brain, or to prevent its free return to the heart. Hence it is, that full living, habitual intoxication, sedentary pursuits, too great indulgence in sleep, intense and long-continued thought, have always been accused of leading to apoplexy.

The principal *exciting* causes of apoplexy, are the distension of the stomach by a full meal, the immoderate use of wine or spirits, straining to evacuate a costive stool, violent exercise, very long or loud speaking, severe fits of coughing, tumours on the neck, stooping, the recumbent posture, and, lastly, violent passions of the mind. It is a singular circumstance, that both heat and cold, when in an extreme degree, may occasion apoplexy. The *coup de soleil* of hot climates has been considered, on good authority, to be of the nature of apoplexy. The improper use of the warm bath has, under my own observation, brought on complete and fatal apoplexy. On the other hand, excessive cold produces a torpor and sleepiness, apparently of the comatose kind. This was strikingly exemplified in the celebrated adventure of Dr. Solander and Sir Joseph Banks on the mountains near the Straits of Magellan. The disposition to sleep is almost irresistible; but, in the emphatic language of Dr. Solander, whoever indulges it, “wakes no more.”

It belongs to this place to remark, that an apoplectic attack is not uncommon in the progress of other diseases. It occasionally occurs in fevers, small-pox, rheumatism, gout, and hooping-cough; and it is a still more frequent consequence of organic diseases of the heart, more particularly of such as are attended with a bounding pulse, and in their course become complicated with dropsy.

Bleeding and mercury are two great causes of apoplexy.

SYMPTOMS.

It is very seldom that this dreadful visitation is experienced without the occurrence of symptoms to warn the patients of its probable approach. There are a few instances, indeed, of any kind of severe disease occurring without some premonitory symptoms; but they are not often so unequivocal as those which indicate the apoplectic tendency. With a view to practice, such symptoms are of infinitely more importance than those of the fit itself; and they accordingly require the most serious attention from the physician. For the sake of perspicuity, they may be arranged according as they affect the head generally, the external senses, the internal senses, or the organs of voluntary motion.

To the first class belong pain of the head (generally a dull pain, with a sense of weight, but occasionally a more acute pain, accompanied with the feeling of the head being bound round by a cord or wire;—giddiness, particularly on stooping, or any attempt to turn the head quickly round; throbbing of the temporal arteries. To the second class belong transient deafness, ringing in the ears, epistaxis, obscurity or irregularity of vision, transient blindness.—To the third, stupor, drowsiness, incoherent talking, a state resembling intoxication, disturbed sleep, failure of the memory, loss of temper.—To the fourth, twisting of the mouth, falling of the eyelid, numbness and weakness of a finger, dragging of the leg, stammering. After experiencing, for a longer or shorter time, one or more of these warnings, the patient falls into the apoplectic fit; and Dr. Abercrombie has well described the several ways in which this takes place.

1. In the most usual form of apoplectic seizure, the patient falls down *suddenly*, deprived of sense and motion, and lies like a person in a deep sleep. He neither hears nor sees, nor feels. Unconscious of every thing around him, he is alike insensible to the exertions of his medical attendants, and the anxieties of his friends. The suddenness of the attack is that feature of the disorder which most immediately impresses itself upon the notice of observers; and being so very general, the disease has from this circumstance in all ages received its name.

2. The second form of apoplectic seizure commences by a sudden attack of violent pain of the head, accompanied with paleness of the face, sickness at stomach, vomiting, and transient loss of recollection. The patient, in some instances, falls down in a state resembling syncope, but recovers in a few minutes, and is able to walk. After a few hours, however, the head-ache continuing, he becomes oppressed, and *gradually* sinks into perfect coma or lethargy.

3. The third form of apoplectic seizure begins with a sudden attack of *palsy* of one side, with loss of speech, which after the lapse of some hours passes gradually into apoplexy.

In which ever way the apoplectic fit commences, there are certain appearances presented during its continuance, which merit attention. The pulse, at first, is commonly small and irregular; but as the system recovers from the shock, the pulse becomes full and strong, and is generally slower than natural. Respiration is much embarrassed, being always slow, and occasionally irregular. In all the severer degrees of the

disease, this laborious breathing is accompanied by *stertor*; and a frequent appearance is that of foam, or frothy saliva, excreted from the mouth, and blown away from the lips with considerable force. This latter symptom has always been looked upon as indicative of the greatest danger.

The skin is commonly warm, and bathed in a copious perspiration. In the worst cases of the disease, a cold clammy sweat has been observed. The face is generally pale; the cornea dull and glassy; and the pupils permanently dilated. The teeth are closely clenched; and the power of swallowing, though seldom wholly lost, is for the most part so much impeded, as to oppose the most serious obstacles to the administration of remedies. The bowels are torpid, as is usual in all cases of cerebral oppression, and they resist the action even of powerful cathartics. If blood is drawn from the arm, the coagulum is commonly firm; and Sir Gilbert Blane states that it is in most instances buffy.

The duration of the apoplectic fit varies from two or three hours to as many days. Thirty hours may be called the average duration. [*Gregory.*]

Sanguineous apoplexy is sometimes preceded by giddiness, dimness of sight, drowsiness, loss of memory, or faltering of the tongue in speaking; but it more usually happens, that without much previous indisposition the person falls down suddenly, the face is red, and appears puffed up, the veins of the head, particularly of the eyes, temples, and neck, seem turgid, the head feels hot, the eyelids are half open and rigid, the eyes are prominent and fixed, the breathing is difficult and stertorous, and for the most part the pulse is strong, regular, and generally less frequent than what is natural. In a few instances, a grinding of the teeth, with slight convulsive motions, are observable. When the disease continues for any length of time, the pulse becomes languid, weak, and slow, and the breathing is shortened, until at length it ceases altogether.

In serious apoplexy the attack is more gradual in general, the face is pale and humid, the veins are depressed, the pulse is small, weak, irregular, and intermitting, respiration is impeded and stertorous, and the extremities are cold and flaccid. Sometimes these appearances are preceded by vertigo, torpor, and an impediment in the speech, together with a failure of memory.

Although the whole body is affected with the loss of sense and motion in apoplexy, it takes place nevertheless very often more on one side than the other, which is called a hemiplegia, and in this case the side least affected with palsy is somewhat convulsed.

In some few instances of apoplexy the patient lies for several days insensible and motionless, and yet gradually recovers the use of his understanding, and his muscular strength; but for the most part he is permanently deprived of the command of one side of his body, or he regains it imperfectly after a time; his mind sustains a shock which is never recovered from; his sensations and perceptions becoming less accurate, and his memory and powers of combining being much weakened, or at least his faculty of expression; for even while his memory and

imagination are unimpaired, he is not always able to find appropriate words to express the notion which is excited in his mind. [Thomas.]

PROGNOSIS.

Where there is extravasation, the patient's recovery will be slow and difficult; for the power of absorption cannot be equal to its being immediately taken up. When the person's recovery is immediate, it is a presumptive evidence that there has been neither extravasation, effusion, nor exudation, but that the compression arose from a repletion in the vessels of the brain. The sanguineous apoplexy is more dangerous than the serous.

DISSECTION.

Dissections of those who have died of sanguineous apoplexy offer ample proof of the arterial as well as the venous system being in a remarkable state of repletion. When the scalp is divided, there is sometimes a considerable flow of blood from the occipital and frontal veins; indeed, during the dissection the venous blood flows from all parts of the head. The dura mater is sometimes thickened and bound to the cranium by strong adhesions; sometimes the tunica arachnoides loses its transparency, is opaque, and much thickened. The pia mater is often remarkably vascular; the veins are turgid with dark blood, and in particular parts of this membrane there appears high arterial action; the whole surface sometimes acquires a bright vermilion tint. Between the pia mater and tunica arachnoides there is often to be observed a serous effusion which in some bodies is colourless; in others, torpid, bloody, or even mixed with streaks of coagulable lymph. With respect to the substance of the brain, it is frequently found unusually firm, and when cut into, the numerous points of blood show that the divided vessels are enlarged. A considerable quantity of serous fluid is often found in the ventricles, and these are much enlarged. For the most part, extravasated blood is met with in the cranium, sometimes between the membranes, and sometimes in the substance of the brain, and sometimes in the ventricles. Dissections have confirmed the observation, that the blood is generally but not invariably found extravasated in the hemisphere opposite to the side of the body which was paralyzed.

COMMON PRACTICE.

Bleeding copiously and profusely, mercury, tarter emetic, sulphate of zink, blisters, issues, &c.

REFORMED PRACTICE.

Indications of Cure.—The object to be accomplished in this complaint will be during the paroxysm, first, to suspend it, by recalling the blood from the brain to the surface and extremities; second, to prevent a determination of blood to that organ.

When called to a person, labouring under a fit of apoplexy, prompt and energetic measures must be put in execution. The patient should be immediately removed to a pleasant, airy, and cool place, and placed

in a recumbent position to favor a return of blood from the brain. All compression should be removed from the neck, and all tight bandages or legatures.

The feet and legs must be immediately immersed in very warm ley water. This simple process is attended with the most extraordinary effects in all cerebral affections, as well as numerous other diseases. The reasons of which will appear obvious to all who have perused the principles of this practice detailed in the first part of this work. I have never known it fail to exert a salutary and decided good effect. They should be continued in the water for fifteen or twenty minutes, and friction then applied to them. The whole surface should also be bathed with a mild tincture of Capsicum, and applied very warm. If the patient is unable to take medicine, a large injection, or clyster should be immediately administered, made as follows:

Take infusion of Lobelia, half a pint.

Milk, a pint.

Sweet or Olive, Oil a gill.

Molasses, one gill.

Fine Salt, a tea-spoonful. Mix, and introduce the whole with a French Syringe.

This will serve nearly all the purposes of a purgative, with the additional advantage of a quicker operation. From the large quantities of feculent matter which it discharges from the bowels, and from its action upon the brain through the medium of the stomach, it is productive of great benefit. The patient should be covered warm, in order to excite perspiration. Hot bricks covered with cloths wet with vinegar may be applied to the extremities, to assist in recalling the blood back to its original channels.

In all the cases that I have ever attended of apoplexy I have invariably found that the cause of the disease consisted in an unequal circulation of the blood. It recedes from the extremities, and is effused upon the brain. Hence when you ask a patient who has the premonitory or incipient symptoms of apoplexy, if the feet are not cold, they will answer in the affirmative; from which circumstance the indication of cure may be clearly inferred.

A mustard plaster should also be immediately applied between the shoulders.

As soon as the patient can swallow, let a brisk purgative be administered. This class of medicines is very important in apoplexy.

Sometimes it is in part occasioned by an over-distention of the stomach, and a morbid state of the alimentary canal, and evacuations of this kind are indispensably necessary, not only to unload the stomach and bowels, but likewise to remove the turgescence or congestion of the brain by the sympathetic action exerted on this organ through the medium of the stomach.

These are the means to be pursued during an attack of the complaint, and they will be found altogether more effectual than the sanguinary practice now pursued, viz: "to abstract a vast quantity of blood, from six to eight pounds," to use the language of a standard author.

It seems astonishing that physicians persist in pursuing a practice

which has been conclusively shown, by writers, to bring on apoplexy, or congestions of the brain. Occasionally an author may be found who has experienced the mischievous effects of bleeding, and among the number, I think, is Professor Recamier, who has several times observed loss of blood in such cases "aggravate the cerebral congestion." I have not the least evidence that blood-letting has the smallest power to diminish the violence or duration of an apoplectic paroxysm, but on the contrary, I have every reason to believe that it so far weakens the powers of reaction, as greatly to retard the cure, or prove fatal to the patient.

I attended an elderly person who was subject to the apoplexy, and who upon any attack, or symptoms of it, sent for his physician, who always bled him, till after a while it appeared almost necessary that he should be bled to save his life. I remonstrated with the man, and told him the consequence of such a procedure. He, however, paid no attention to my remarks, but continued to submit to the treatment of his family physician, till in a short time the complaint proved fatal, as I predicted.

I attended a patient about the same age, and the same complaint, pursued the treatment here recommended, and he recovered, and now enjoys good health. When the patient has recovered from an attack of apoplexy, and sometimes it continues a week or two in a greater or less degree, the next object will be to prevent a return of it; to effect which, it will be necessary to continue the use of *purgatives* about once a week. Also *emetics* must be given where there is nothing to contra-indicate their use. They also should be repeated as often as the purgatives. They have a very beneficial effect by diverting the blood from the head, and throwing it into the capillary system, and they have also a tendency to keep up perspiration. Moderate sweating should be now and then encouraged by the use of the vapour bath, which likewise has a tendency to prevent a return of the complaint, by expelling such humours or extraneous agents as corrupt, or as causes a thick and sizzly state of it; in other words, it has a tendency, with the other means recommended, to purify the blood. For the same purpose the patient may take alternative infusions and drinks, such as the seeds or roots of *Burdock*, *Elder flowers*, *Sarsaparilla*, &c.

It will be necessary to continue the practice of bathing the feet at least three or four times a week. The head may likewise be bathed with a weak tincture of *capsicum*, particularly when there is any pain. These measures must be continued until there are no more symptoms of the disease remaining.

I have occasionally been in the habit of applying cups to the temples and the nape of the neck, when the patient has complained of a fulness and dizziness of the head, and I have found benefit derived from it, but I have never resorted to cupping, even during an attack of the complaint, and very seldom in any stage of it, having succeeded by the other means already mentioned. But in a very severe paroxysm it may be justifiable to resort to it. An anodyne may be given when the patient complains of much restlessness and pain. Ten grains of the *diaphoretic powders* will serve the double purpose of procuring sleep, and promoting perspiration.

REGIMEN.

Much depends upon diet in this complaint. It is often brought on by high living, inducing plethora, and therefore may be prevented or cured by an opposite course of living. All high seasoned victuals, roasted meat, &c. must not be used; neither wine, fermented liquors, ardent spirits, &c. He must be confined to a cooling, spare, vegetable diet, with regular exercise in the open air, the use of the tepid bath likewise; great fatigue or exertion must be avoided, also intense application to study. He must be careful not to stoop, or continue in a bending posture. He must avoid sudden transitions from heat to cold, and in all things observe universal temperance.

CHAPTER VI.

C A T A L E P S Y, (*Catalepsia*.)

DESCRIPTION.

CATALEPSY consists in the temporary suspension of voluntary motion, and consciousness and volition. The exact position of the body remaining the same as it was when the attack came on. It generally lasts a short time, when it subsides, leaving the person in the same condition as formerly, without any disease or recollection of any thing that has passed.

CAUSES.

Catalepsy may arise from various causes—from passions, intense application of mind to any study or pursuit, suppressed customary evacuations, worms, morbid state of the stomach and alimentary canal, plethora, &c. A person died of the catalepsy in this city, and was examined by Dr. Kissam, who stated that one of the valves of the heart had become callous or undurated.

SYMPTOMS.

The disease generally commences suddenly, without any premonitory symptoms, but more generally the attack is sudden, and commences without any warning; but when there is any warning given of its approach, it is known by swimming in the head, or head-ache, lassitude, pain in the breast, sense of heaviness, tremor of the hands and legs, flatulence, yawning, &c. When an attack commences, it is very sudden, and the patient remains in the same position like a statue, without being able to move a single finger. The eyes remain immovably fixed, either open or closed. If a limb is changed, it still remains fixed in the same position until the paroxysm subsides. All the senses are entirely suspended, and the patient remembers nothing that has occurred, and it is stated if the paroxysm comes on while he is conversing, or in the performance of any other continuous act, he will resume the thread of

the conversation, or even finish the half-pronounced word, or continue his acts as soon as the paroxysm is over, as if no interruption had taken place. It is stated that cases have occurred where patients during a paroxysm have continued their employment, such as walking without any consciousness of it. A case is mentioned by Galen, in which the patient, (one of his fellow students,) lay motionless, like a dog, with his eyes open, but he heard and remembered what occurred during the paroxysm. Sometimes respiration is feeble, and the surface is cold.

The continuance of a fit of catalepsy varies from a few minutes to several days. The patient, when it leaves him, sighs deeply. Sometimes the paroxysm comes on three or four times a day, and only lasts a few minutes. Hoffman mentions the case of a woman in which upwards of one hundred paroxysms occurred during a period of forty days.

Catalepsy is sometimes complicated with other diseases, such as epilepsy, hysteria, &c.

This disease seems to be similar, or nearly allied to what is called a *trance*, and *extacy*. It either will go off spontaneously, or may be removed by medicines, and proper diet.

TREATMENT.

During a paroxysm of the catalepsy, friction should be applied to the surface and extremities, and particularly around the region of the heart. Afterwards the disease must be treated on general principles; all the secretions and excretions regulated. The stomach, bowels, and skin should be kept in a healthful tone. *Anti-spasmodics* and *restoratives* administered, with suitable *diet* and *exercise*.

CHAPTER VII.

LETHARGY, (*Coma*.)

DESCRIPTION.

LETHARGY is generally a symptomatic disease, arising from apoplectic symptoms, or a morbid state of the stomach or some other complaint. It may arise also from the use of opium, or other narcotic substances.

TREATMENT.

Sometimes drowsiness or lethargy proves very troublesome, the person falling asleep very often, and very contrary to their wishes. When this is the case, the best remedy, and one that is very effectual, is the administration of an emetic, to be repeated occasionally; and also immersing the feet in warm water.

The bowels must be kept regular. A light vegetable diet should also be used.

CHAPTER VIII.

FAINTING OR SWOONING. (*Syncope.*)

DESCRIPTION.

FAINTING consists in a decreased action, and sometimes total cessation of the pulse and respiration. It is sometimes preceded by anxiety about the præcordia, or heart; a sense of fullness ascending from the stomach towards the head; vertigo, or confusion of ideas; dimness of sight, and coldness of the extremities. Attacks of syncope, or fainting are frequently attended with, or end in vomiting, and sometimes in convulsions, or in an epileptic fit.

CAUSES.

Fainting is most frequently occasioned by profuse evacuations, especially of blood; but it may happen also from violent passions of the mind, from surfeits, excessive pain, violent exercise, disgusting sights, drinking freely of warm or strong liquors, exposure to great heat, intense application to study, certain odours or smells, &c.

People of delicate constitutions are very subject to it from slight causes; and sometimes it will arise from affections of the heart and large vessels, not easy to be understood. Fainting is also a symptom of many disorders, especially of that fatal one called a *polypus of the heart*, of the plague, profuse bleeding or flooding, and many putrid diseases.

A disposition to this disease may take place wherever debility exists; but when it frequently recurs, without any obvious cause, a morbid state of the heart or brain themselves is to be suspected.

SYMPTOMS.

A syncope begins with a remarkable anxiety about the heart; after which follows a sudden extinction, as it were, not only of the animal powers and actions, but also of the vital powers, so that the patients are deprived of pulse, sense, and motion, all at once.

In these cases the patient does not entirely lose his senses, but turns cold and pale; and the pulse continues to beat, though weakly; the heart also seems to tremble rather than beat, and the respiration, or breathing, is just perceptible. But in the true syncope, not the smallest sign of life can be perceived; the face hath a death-like paleness, the extremities are cold, the eyes shut, or at least troubled; the mouth sometimes shut, and sometimes gaping wide open; the limbs flaccid, or limber, and the strength quite gone; as soon as they begin to recover, they fetch deep and heavy sighs.

TREATMENT.

In order to revive the patients, they ought to be laid in an horizontal posture, in any airy place; the legs, thighs, and arms, are to be

rubbed with hot flannels; very strong vinegar, or salt of hartshorn, may be held to the nostrils, and the following mixture given:

Take Spirits of Hartshorn, (*Aq. Ammonia.*) 10 drops.

Compound Spirits of Lavendar, (*Spls. Lavend.*) 1 tea-spoonful. Mix.

Dilute with water, and give the whole. If circumstances permit, let the feet be immersed in warm water, and the breast, and pit of the stomach rubbed with the tincture of *capsicum*.

If the patient does not soon revive, let a little hot spirits or brandy sling be administered. Persons subject to fainting should avoid all crowded assemblies, or places where the air is confined. They should avoid every thing calculated to excite the mind or the passions, as well as too much labor, or fatigue. All tight bandages, neck-cloths, corsets, &c. must be immediately removed.

CHAPTER IX.

GIDDINESS. (*Vertigo.*)

DESCRIPTION.

VERTIGO or dizziness is generally symptomatic of some other complaint, such as dyspepsia, hypochondria, or it may be a premonitory symptom of apoplexy, or over-determination of blood to the head.

SYMPTOMS.

The patient is suddenly seized with a sense of swimming in the head. Every thing appears to him to turn around. He staggers, and is in danger of falling down. His complaint is attended with very little danger where it arises from hysterics, or any nervous disorder. But when it arises from plethora, or an unnatural quantity of blood in the head, there is danger of apoplexy.

TREATMENT.

It will be necessary first to ascertain the cause of the complaint. If it is symptomatic of some other disorder, that must first be removed in order to cure it; but if it be a primary affection, or if it be apparently seated in the head or stomach, a *purgative* should be occasionally used, and the feet bathed. If this should not remove it, administer an *emetic*.

CHAPTER X.

DELIRIUM TREMENS. (*Mania Potu.*)

DESCRIPTION.

THIS is a disease which in this day very often occurs among those who are addicted to the excessive use of ardent spirits, and such as indulge in the use of opium and other narcotic substances. It is characterized by most of the ordinary signs of insanity. This disease is called by some, the brain fever of drunkards.

CAUSES.

It is difficult to state with certainty what the proximate cause of this complaint may be. Dr. Coates, who wrote a treatise on it, says that "the disease is the result, not of the application, but of the sudden intermission of the use of these articles." But it appears to me to arise from excessive stimulus of the stomach and brain, in which organs the complaint is seated.

SYMPTOMS.

It commences with nausea, vomiting, or belching of wind, and sometimes after a sudden disuse, it is said, of stimuli, and in subjects addicted to the use of spirits to excess, without becoming habitually drunk. The complaint seems to come on gradually, and it is several days before it arrives to its greatest degree of violence. There is great wakefulness, walking to and fro, or raving, and the patient seems to be in the greatest agitation, and distress of mind. He is very apt to imagine that there is evil spirits continually before him, or haunting him. I was called to one case of this kind where the person insisted that there were devils before him, which he could see upon the carpet. This disease, says Teatcher, "is always attended by febrile symptoms, and it is one of its peculiarities that the mind is continually haunted with the idea that they are infested by snakes and insects. I have frequently seen patients," says he, "weary in attempting to catch snakes, which they imagined were curling about them under their clothes. The countenance assumes a peculiar appearance, expressive of anxiety, alarm and suspicion. The patient becomes irritable, talkative, and often cries out for assistance. He becomes boisterous and raving, being continually tormented with the idea that some one is about to rob or destroy him. The system is usually more or less disordered during the complaint. There is costiveness, loathing of food, &c.

Delirium tremens usually runs its course in four or five days, and often terminates in a fit of epilepsy; at other times where it is properly treated, the patient recovers.

TREATMENT.

The first object of the practitioner in this complaint, will be, to allay the paroxysm, and to calm and support the nervous system. and afterwards, by a proper course of treatment, to prevent a return of the complaint.

Should there be a determination of blood to the head, which may be known by a redness of the countenance, a fullness and beating of the carotid arteries, heart, &c. the first object will be, to equalize the circulation by recalling the blood to the surface, and extremities. This may be effected by bathing the feet and legs in a tub of warm ley water. and applying mustard plasters to the feet, and nape of the neck.

At the same time a *brisk cathartic* must be administered. After its operation, give a pill made of the solid opium, about the size of a pea, which contains three grains, to be repeated every two hours until rest is procured. This will break the paroxysm and procure sleep. Afterwards the patient must be treated according to the symptoms exhibited. *Emetics* will be found very useful, particularly the lobelia, and which may be given in the same kind of spirits that the patient has been in the habit of taking.

CHAPTER XI.

PRIAPISM OR SATYRIASIS.

DESCRIPTION.

THIS disease affects men, the same as the Furor Uterinus affects women.

SYMPTOMS.

I shall here also quote the remarks of Lieutaud on this complaint.

“What is to be understood by *Priapism* or *Satyriasis*, no man of letters is ignorant. This lustful itching of the genitals often exercises such tyranny, that it hurries the patients, deaf to all persuasions and threatening, even to *madness*. This most disgraceful disease affects both sexes, changing only its name, and is in a small degree mitigated, only by the emission of semen. But the patients are inflamed with so great a desire of venery, that even after repeated copulation they are not at all satiated. *Satyriasis* mostly invades the young, the duration of which at this age, is not very long; but it sometimes comes on with such violence as to occasion death. Nor does it spare more advanced age, in which it is thought not to be dangerous, but far more obstinate. Debaucheries are obnoxious to it; those excited by the rage of love; those who are intoxicated by very facetious or lustful conversation with their paramours: those who are very fond of reading lascivious books; or who use cantharides in order to excite lascivious venery; and lastly, high

livers, or those who indulge in wine or rich dainties. This lustful priapism is also promoted by cancerous ulcers of the bladder, great size of the kidneys, double spermatic vessels, and other organic faults, which *dissection* exhibits."

TREATMENT.

The same as in *Furor Uterinus*.

Those who are seized with this shameful disorder ought to avoid, worse than a snake, brothels, lustful thoughts, obscene books, lascivious conversation, and in short all sports of the mind, which may stir up, or aggravate the disease.

CHAPTER XII.

DRUNKENNESS AND INTEMPERANCE.

I HAVE already touched upon this subject, but so prevalent have these crimes and diseases become, that I deem it necessary to make a few further remarks. I shall make a few extracts from the writings of Dr. Rush upon the effects of ardent spirits, after which I shall point out a remedy:

By ardent spirits, I mean those liquors only which are obtained by distillation from fermented substances of any kind. To their effects upon the bodies and minds of men, the following enquiry shall be exclusively confined. Fermented liquors contain so little spirit, and that so intimately combined with other matters, that they can seldom be drunken in sufficient quantities to produce intoxication, and its subsequent effects, without exciting a disrelish to their taste, or pain, from their distending the stomach. They are, moreover, when taken in a moderate quantity, generally innocent, and often have a friendly influence upon health and life.

The effects of ardent spirits divide themselves into such as are of a prompt, and such as are of a chronic nature. The former discover themselves in drunkenness; and the latter, in a numerous train of diseases and vices of the body and mind.

I shall begin by briefly describing their prompt, or immediate effects in a fit of drunkenness.

This odious disease (for by that name it should be called) appears with more or less of the following symptoms, and most commonly in the order in which I shall enumerate them:

1. Unusual garrulity.
2. Unusual silence.
3. Captiousness, and a disposition to quarrel.
4. Uncommon good humour, and an insipid simpering, or laugh.
5. Profane swearing, and cursing.
6. A disclosure of their own, or other people's secrets.

7 A rude disposition to tell those persons in company, whom they know, their faults.

8. Certain immodest actions. I am sorry to say, this sign of the first stage of drunkenness, sometimes appears in women, who, when sober, are uniformly remarkable for chaste and decent manners.

9. A clipping of words.

10. Fighting; a black eye, or a swelled nose, often mark this grade of drunkenness.

11. Certain extravagant acts, which indicate a temporary fit of madness.

It belongs to the history of drunkenness to remark, that its paroxysms occur, like the paroxysms of many diseases, at certain periods, and after longer or shorter intervals. They often begin with annual, and gradually increase in their frequency, until they appear in quarterly, monthly, weekly, and quotidian or daily, periods. Finally, they afford scarcely any marks of remission, either during the day or the night.

It is further remarkable, that drunkenness resembles certain hereditary, family, and contagious diseases. I have once known it to descend from a father, to four out of five of his children. I have seen three, and once four, brothers, who were born of sober ancestors, affected by it, and I have heard of its spreading through a whole family composed of members not originally related to each other. These facts are important, and should not be overlooked by parents, in deciding upon the matrimonial connexions of their children.

Let us next attend to the chronic effects of ardent spirits upon the body and mind. In the body, they dispose to every form of acute disease; they moreover *excite* fevers in persons predisposed to them, from other causes. This has been remarked in all the yellow fevers which have visited the cities of the United States. Hard drinkers seldom escape, and rarely recover from them. The following diseases are the usual consequences of the habitual use of ardent spirits, viz :

1. A decay of appetite, sickness at stomach, and a puking of bile, or a discharge of a frothy and viscid phlegm, by hawking, in the morning.

2. Obstructions of the liver.

2. Jaundice, and dropsy of the belly and limbs, and finally of every cavity in the body.

4. Hoarseness, and a husky cough, which often terminate in consumption, and sometimes in an acute and fatal disease of the lungs.

5. Diabetes, that is, a frequent and weakening discharge of pale, or sweetish urine.

6. Redness, and eruptions on different parts of the body. They generally begin on the nose, and after gradually extending all over the face, sometimes descend to the limbs, in the form of leprosy. They have been called 'Rum-buds,' when they appear in the face. In persons who have occasionally survived these effects of ardent spirits on the skin, the face, after a while, becomes bloated, and its redness is succeeded by a death-like paleness.

7. A fetid breath, composed of every thing that is offensive in putrid animal matter.

8. Frequent and disgusting belchings. Dr. Haller relates the case of a notorious drunkard having been suddenly destroyed, in consequence of the vapour discharged from his stomach by belching, accidentally taking fire by coming in contact with the flame of a candle.

9. Epilepsy.

10. Gout, in all its various forms of swelled limbs, colic, palsy and apoplexy.

Lastly 11. Madness. The late Dr. Waters, while he acted as house pupil and apothecary of the Pennsylvania Hospital, assured me, that in one third of the patients confined by this terrible disease, it had been induced by ardent spirits.

Most of the diseases which have been enumerated, are of a mortal nature. They are more certainly induced, and terminate more speedily in death, when spirits are taken in such quantities, and at such times, as to produce frequent intoxication; but it may serve to remove an error with which some intemperate people console themselves, to remark, that ardent spirits often bring on fatal diseases, without producing drunkenness. I have known many persons destroyed by them, who were never completely intoxicated during the whole course of their lives. The solitary instances of longevity which are now and then met with in hard drinkers, no more disprove the deadly effects of ardent spirits, than the solitary instances of recoveries from apparent death by drowning, prove that there is no danger to life from a human body lying an hour or two under water.

Not less destructive are the effects of ardent spirits upon the human mind. They impair the memory, debilitate the understanding, and pervert the moral faculties. It was probably from observing these effects of intemperance in drinking, upon the mind, that a law was formerly passed in Spain, which excluded drunkards from being witnesses in a court of justice. But the demoralizing effects of distilled spirits, do not stop here. They produce not only falsehood, but fraud, theft, uncleanness, and murder. Like the demoniac mentioned in the New-Testament, their name is 'legion,' for they convey into the soul a host of vices and crimes.

A more affecting spectacle cannot be exhibited, than a person into whom this infernal spirit, generated by habits of intemperance, has entered. It is more or less affecting, according to the station the person fills in a family, or in society, who is possessed by it. Is he a husband? How deep the anguish which rends the bosom of his wife! Is she a wife? Who can measure the shame and aversion which she excites in her husband? Is he the father, or is she the mother, of a family of children? See their averted looks from their parent, and their blushing looks at each other! Is he a magistrate? or has he been chosen to fill a high and respectable station in the councils of his country? What humiliating fears of corruption in the administration of the laws, and the subversion of public order and happiness, appear in the countenances of all who see him! Is he a minister of the gospel?—Here language fails me.—If angels weep—it is at such a sight.

In pointing out the evils produced by ardent spirits, let us not pass by their effects upon the estates of the persons who are addicted to

them. Are they inhabitants of cities?—Behold! their houses stripped gradually of their furniture, and pawned, or sold by a constable, to pay tavern debts. See! their names upon record in the dockets of every court, and whole pages of newspapers filled with advertisements of their estates for public sale. Are they inhabitants of country places? Behold their houses with shattered windows,—their barns with leaky roofs,—their gardens overrun with weeds,—their fields with broken fences, their hogs without yokes, their sheep without wool,—their cattle and horses without fat,—and their children filthy and half clad, without manners, principles and morals. This picture of agricultural wretchedness is seldom of long duration. The farms and property thus neglected, and depreciated, are seized and sold for the benefit of a group of creditors. The children that were born with the prospect of inheriting them, are bound out to service in the neighbourhood; while their parents, the unworthy authors of their misfortunes, ramble into new and distant settlements, alternately fed on their way by the hand of charity, or a little casual labour.

Thus we see poverty and misery, crimes and infamy, diseases and death, are all the natural and usual consequences of the intemperate use of ardent spirits.

I have classed death among the consequences of hard drinking. But it is not death from the immediate hand of the Diety, nor from any of the instruments of it which were created by him. It is death from *suicide*. Yes—thou poor degraded creature, who art daily lifting the poisoned bowl to thy lips—cease to avoid the unhallowed ground in which the self-murderer is interred, and wonder no longer that the sun should shine, and the rain fall, and the grass look green upon his grave. Thou art perpetrating gradually, by the use of ardent spirits, what he has effected suddenly, by opium—or a halter. Considering how many circumstances from surprise, or derangement, may palliate his guilt, or that, (unlike yours) it was not preceded and accompanied by any other crime, it is probable his condemnation will be less than yours at the day of judgment.

I shall now take notice of the occasions and circumstances which are supposed to render the use of ardent spirits necessary, and endeavour to shew that the arguments in favour of their use in such cases are founded in error, and that in each of them, ardent spirits, instead of affording strength of the body, increase the evils they are intended to relieve.

1. They are said to be necessary in very cold weather. This is far from being true; for the temporary warmth they produce, is always succeeded by a greater disposition in the body to be affected by cold. Warm dresses, a plentiful meal just before exposure to the cold, and eating occasionally a little gingerbread, or any other cordial food, is a much more durable method of preserving the heat of the body in cold weather.

2. They are said to be necessary in very warm weather. Experience proves that they increase, instead of lessening the effects of heat upon the body, and thereby dispose to diseases of all kinds. Even in the warm climate of the West-Indies, Dr. Bell asserts this to be true.

“Rum (says this author) whether used habitually, moderately, or in excessive quantities in the West-Indies, always diminishes the strength of the body, and renders men more susceptible of disease, and unfit for any service in which vigour or activity is required.” As well might we throw oil into a house, the roof of which was on fire, in order to prevent the flames from extending to its inside, as pour ardent spirits into the stomach, to lessen the effects of a hot sun upon the skin.

3. Nor do ardent spirits lessen the effects of hard labour upon the body. Look at the horse; with every muscle of his body swelled from morning till night in the plough, or a team, does he make signs for a draught of toddy, or a glass of spirits to enable him to cleave the ground, or to climb a hill?—No—he requires nothing but cool water and substantial food. There is no nourishment in ardent spirits. The strength they produce in labour is of a transient nature, and is always followed by a sense of weakness and fatigue.

But are there no conditions of the human body in which ardent spirits may be given? I answer—there are. 1st. When the body has been suddenly exhausted of its strength, and a disposition to faintness has been induced. Here a few spoonfuls, or a glass full of spirits, with or without water, may be administered with safety and advantage. In this case we comply strictly with the advice of Solomon, who restricts the use of “strong drink” only “to him who is ready to perish.”—2dly. When the body has been exposed for a long time to wet weather, more especially, if it be combined with cold. Here a moderate quantity of spirits is not only safe, but highly proper to obviate debility, and to prevent a fever.

“Valetudinarians, especially those who are afflicted with diseases of the stomach and bowels, are very apt to seek relief from ardent spirits. Let such people be cautious how they make use of this dangerous remedy. I have known many men and women, of excellent characters and principles, who have been betrayed by occasional doses of gin and brandy, into a love of those liquors, and have afterwards fallen sacrifices to their fatal effects. The different preparations of opium are much more safe and efficacious than distilled cordials of any kind, in flatulent or spasmodic affections of the stomach and bowels. So great is the danger of contracting a love for distilled liquors by accustoming the stomach to their stimulus, that as few medicines as possible should be given in spirituous vehicles, in chronic diseases. A physician of great eminence, and uncommon worth, who died towards the close of the last century, in London, in taking leave of a young physician of this city, who had finished his studies under his patronage, impressed this caution with peculiar force upon him, and lamented at the same time, in pathetic terms, that he had innocently made many sets by prescribing brandy and water in stomach complaints. It is difficult to tell how many persons have been destroyed by those physicians who have adopted Dr. Brown’s indiscriminate practice in the use of stimulating remedies; the most popular of which is ardent spirits; but it is well known, several of them have died of intemperance in this city, since the year 1790.

“No man ever became suddenly a drunkard. It is by gradually accustoming the taste and stomach to ardent spirits, in the forms of *grog*,
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and *toddy*, that men have been led to love them in their destructive mixtures and in their simple state. Under the impression of this truth, were it possible for me to speak, with a voice so loud as to be heard from the river St. Croix, to the remotest shores of the Mississippi, which bound the territory of the United States, I would say, Friends and Fellow Citizens! avoid the habitual use of those two seducing liquors, whether they be made with brandy, rum, gin, Jamaica spirits, whiskey, or what is called cherry bounce. It is true, some men, by limiting the strength of those drinks, by measuring the spirit and water, have drunken them for many years, and even during a long life, without acquiring habits of intemperance or intoxication; but many more have been insensibly led, by drinking weak toddy, and grog, first at their meals, to take them for their constant drink, in the intervals of their meals; afterwards, to take them, of an increased strength, before breakfast in the morning, and finally to destroy themselves by drinking undiluted spirits, during every hour of the day and night. I am not singular in this remark. 'The consequences of drinking rum and water, or *grog* as it is called, (says Dr. Mosely) is, that habit increases the desire of more spirit, and decreases its effects; and there are very few grog-drinkers, who long survive the practice of debauching with it, without acquiring the odious nuisance of a dram-drinker's breath, and downright stupidity and impotence.'

"Where are all the Indian tribes, whose numbers and arms formerly spread terror among their civilized neighbours? I answer in the words of the famous Mingo Chief, 'the blood of many of them flows not in the veins of any human creature.' They have perished, not by pestilence or war, but by a greater foe to human life than either of them: Ardent Spirits. The loss of four thousand American citizens, by the yellow fever, in a single year, awakened general sympathy and terror, and called forth all the strength and ingenuity of laws, to prevent its recurrence. Why is not the same zeal manifested in protecting our citizens from the more general and consuming ravages of distilled spirits?—Should the customs of civilized life preserve our nation from extinction, and even from an increase of morality, by those liquors, they cannot prevent our country being governed by men, chosen by intemperate and corrupted voters. From such legislators, the republic would soon be in danger. To avert this evil: let good men, of every class, unite and besiege the general and state governments, with petitions to limit the number of taverns; to impose heavy duties upon ardent spirits; to inflict a mark of disgrace, or a temporary abridgment of some civil right, upon every man, convicted of drunkenness; and finally, to secure the property of habitual drunkards, for the benefit of their families, by placing it in the hands of trustees, appointed for that purpose, by a court of justice.

TREATMENT.

Various have been the means and medicines prescribed for the cure of drunkenness and intemperance. Dr. Chambers of this city, had a celebrated nostrum, which seemed to suspend the disease for a while, but finally returned again.

First, Moral Restraint.—In order to remove this habit, the nearest friend of the intemperate, should pourtray in the most lively and glowing colours, the disgusting, loathsome, and low crime of drunkenness. Let him state to him, explicitly, and positively, that he is forever ruined in soul and body, and will in a very short time, be guilty of the crime of suicide, and be rotting in the grave, if he does not break off from the habit at once. Tell him that his friends and the public, will hold his name and his memory in contempt and ridicule, and that he will only be a by-word, and laughing stock to a gazing multitude.

Tell him that he must break off now, or it will soon be forever too late; he will have no power; that the disease will every day gain ground upon him, and after a very short time, he will have no moral energy to reform.

The advice to him must be, “now or never.”

I lately conversed in this way to a confirmed drunkard, and the consequence was a reformation.

Many hundred drunkards have been cured of their desire for ardent spirits, by a practical belief in the doctrines of the christian religion. Examples of the divine efficacy of christianity for this purpose, have lately occurred in many parts of the United States.

A sudden sense of the guilt contracted by drunkenness, and of its punishment in a future world, it once cured a gentleman in Philadelphia, who, in a fit of drunkenness, attempted to murder a wife whom he loved. Upon being told of it when he was sober, he was so struck with the enormity of the crime he had nearly committed, that he never tasted spirituous liquors afterwards.

A sudden sense of shame.—Of the efficacy of this deep-seated principle in the human bosom, in curing drunkenness, I shall relate three remarkable instances.

A farmer in England, who had been many years in the practice of coming home intoxicated, from a market town, one day observed appearances of rain, while he was in market. His hay was cut, and ready to be housed. To save it, he returned in haste to his farm, before he had taken his customary dose of grog. Upon coming into his house, one of his children, a boy of six years old, ran to his mother, and cried out, “Oh? mother, father is come home, and he is not drunk.” The father, who heard this exclamation, was so severely rebuked by it, that he suddenly became a sober man.

A noted drunkard was once followed by a favourite goat, to a tavern, into which he was invited by his master, and drenched with some of his liquor. The poor animal staggered home with his master, a good deal intoxicated. The next day he followed him to his accustomed tavern, When the goat came to the door, he paused: his master made signs to him to follow him into the house. The goat stood still. An attempt was made to thrust him into the tavern. He resisted, as if struck with the recollection of what he suffered from being intoxicated the night before. His master was so much affected by a sense of shame, in observing the conduct of his goat to be so much more rational than his own, that he ceased from that time to drink spirituous liquors.

A gentleman in one of the southern states, who had nearly destroyed himself by strong drink, was remarkable for exhibiting the grossest marks of folly in his fits of intoxication. One evening, sitting in his parlour, he heard an uncommon noise in his kitchen. He went to the door, and peeped through the key-hole, from whence he saw one of his negroes diverting his fellow servants, by mimicking his master's gestures and conversation when he was drunk. The sight overwhelmed him with shame and distress, and instantly became the means of his reformation.

An advantage would probably arise from frequent representations being made to drunkards, not only of the certainty, but of the *suddenness* of death, from habits of intemperance. I have heard of two persons being cured of the love of ardent spirits, by seeing death suddenly induced by fits of intoxication; in the one case, in a stranger, and in the other, in an intimate friend.

It has been said, that the disuse of spirits should be gradual; but my observations authorize me to say, that persons who have been addicted to them, should abstain from them *suddenly* and *entirely*. 'Taste not, handle not, touch not,' should be inscribed upon every vessel that contains spirits in the house of a man, who wishes to be cured of habits of intemperance. To obviate, for a while, the debility which arises from the sudden abstraction of the stimulus of spirits, laudanum, or bitters infused in water, should be taken, and perhaps a larger quantity of beer or wine, than is consistent with the strict rules of temperate living. By the temporary use of these substitutes for spirits, I have never known the transition to sober habits to be attended with any bad effects, but often with permanent health of body, and peace of mind.

The association of the idea of ardent spirits, with a painful or disagreeable impression upon some part of the body, has sometimes cured the love of strong drink. I once tempted a negro man, who was habitually fond of ardent spirits, to drink some rum, (which I placed in his way) and in which I had put a few grains of tartar emetic. The tartar sickened and puked him to such a degree, that he supposed himself to be poisoned. I was much gratified by observing he could not bear the sight nor smell of spirits for two years afterwards.

I have heard of a man who was cured of the love of spirits, by working off a puke, by large draughts of brandy and water; and I know a gentleman, who, in consequence of being affected with a rheumatism, immediately after drinking some toddy, when overcome with fatigue and exposure to the rain, has ever since loathed that liquor, only because it was accidentally associated in his memory with the recollection of the pain he suffered from his disease.—[*Rush.*]

A tea-spoonful of the tincture of tobacco may be put into the liquor, which the drunkard is in the habit of taking. If this quantity is not sufficient to cause vomiting, let the dose be greater. Let also a mild emetic of lobelia be given every week in the kind of liquor that the person is most in the habit of taking.

It will not only have a beneficial effect upon the stomach and brain, but it will likewise create an aversion or disgust to the kind of spirits formerly made use of.

Tonics should likewise be used, and none is better than the *wine bitters*.

In order to effect a radical cure of delirium tremour, as well as drunkenness, and the irresistible craving after ardent spirits, which is now the great curse and calamity of the world, which has called down the judgments of heaven upon us as a nation, and which has been strikingly manifested in the appearance of the *Cholera*, it will be necessary totally to forbid the use of any kind of ardent, or distilled liquors, and substitute in their place, *good wine*, and which may be freely drank. By the use of wine, that hankering after liquor is destroyed, as well as its corrosive effects upon the stomach, and upon the system generally.

There is nothing, except moral and religious restraint, that will prove such a sovereign antidote and remedy to drunkenness and intemperance, as the use of *good wine*, or wine which has not been adulterated by the addition of alcohol or brandy. Hence it is of the greatest importance in a national point of view, that it should be freely introduced into the country, and sold very low, by removing all duties upon it, while such duties are imposed upon distilled spirits, as will amount to a prohibition. Native vineyards should also be planted by every farmer.

The most powerful, and the most effectual of all means, then, (religion excepted,) entirely to prevent and destroy the hankering thirst for strong drink, is *abstinence from every species of distilled liquors, and the substitution of good wine*. It is a remedy which the most confirmed drunkard, as well as every other person, will always most cheerfully submit to take, and as this class of persons are usually very poor, ought not they to be provided with it free of cost, by individuals or public authorities.

It has been recommended to establish institutions, expressly to confine and treat drunkards; and this no doubt will be very useful, but the means laid down above, will be found above all others, the most effectual,

CLASS VI.

NERVOUS DISEASES.

CHARACTER.

THIS class of disease is confined, or apparently confined to the nervous system.

Irregular, or preternatural motions of the muscles or muscular fibres, are characteristic of this class of diseases.

CHAPTER I.

HYSTERICIS. (*Hysteria*.)

DESCRIPTION.

HYSTERIA or Hysterics is characterized by a grumbling noise in the bowels, followed by a ball ascending to the throat attended with a sense of suffocation, stupor insensibility, convulsions, laughing and crying without visible cause, sleep interrupted by sighing and groaning, attended with flatulence.

Hoffman calls the hysteric affection a cohort of diseases.

Sydenham compares it for the infinite variety of its forms to Proteus, and for the mutability of its appearances to a chameleon. It is attended with more or less delirium.

CAUSES.

THIS disorder may be produced by various causes. It usually arises from certain passions operating upon a feeble constitution.

The persons most liable to this disease are females, from the time of puberty to the age of thirty-five, unmarried women, and young widows, chiefly those of the sanguine temperament; of a relaxed habit; of great sensibility; and of an irritable fibre; more especially after profuse evacuations, whether sanguine or serous; the indolent, and those who are exhausted by either long protracted fevers or habits of intemperance; and such also in whom the uterine hæmorrhage is unseasonably stopped, or habitually obstructed.

Can we therefore hesitate to assign as the predisponent cause, debility with morbid irritability?

SYMPTOMS.

The disease attacks in paroxysm or fits. These are sometimes preceded by dejection of spirits, anxiety of mind, effusion of tears, difficulty of breathing, sickness at the stomach, and palpitations at the heart; but it more usually happens that a pain is felt on the left side, about the flexure of the colon, with a sense of distention, advancing upwards till it gets into the stomach; and removing from thence into the throat, it occasions by its pressure a sensation as if a ball was lodged there, which by authors has been called *globus hystericus*. The disease having arrived at this height, the patient appears to be threatened with suffocation, becomes faint, and is affected with stupor and insensibility; while at the same time the trunk of the body is turned to and fro, the limbs are variously agitated, wild and irregular actions take place in the alternate fits of laughter, crying, and screaming; incoherent expressions are uttered, a temporary delirium prevails, and a frothy saliva is discharged from the mouth. The spasms at length abating, a quantity of wind is evacuated upwards, with frequent sighing and sobbing, and the woman recovers the exercise of sense and motion without any recollection of what has taken place during the fit; feeling, however, a severe pain in the head, and a soreness over the whole body.

In some cases there is little or no convulsive movement, and the person lies for some time seemingly in a state of profound sleep, without either sense or motion.

Hiccup is a symptom which likewise attends in some instances on the hysteric disease; and now and then it happens that a fit of hysteria consists of this alone. In some cases of this nature it has been known to continue for two or three days; during which it frequently seems as if it would suffocate the patient, and proceeds gradually weakening her, till it either goes off, or else occasions death by suffocation: but this last is extremely rare. Besides hiccup, other slight spasmodic affections sometime wholly form a fit of hysteria, which perhaps continue for a day or two, and then either go off themselves, or are removed by the aid of medicine.

In some cases the patient is attacked with violent pains in the back, which extend from the spine to the sternum, and at length become fixed upon the region of the stomach, being evidently of a spasmodic nature, and often prevailing in so high a degree as to cause clammy sweats, a pale cadaverous look, coldness of the extremities, and a pulse hardly perceptible.—[*Thomas.*]

DISCRIMINATION.

Hysteria differs from the hypochondriac affection in the following particulars. It attacks more generally the sanguine and plethoric; comes on soon after the age of puberty, makes its attacks suddenly and violently, and deprives the patient of sensation and voluntary motion. It is accompanied with a sensation of a ball rising in the throat with a sense of suffocation, and is attended usually with a spasmodic affection.

The reverse happens in hypochondriasis. It attacks the melancholy; seldom occurs till after the age of thirty-five; in a tedious disease and

more difficult to remove. Another difference may be pointed out between the two diseases, which is, that hysteria is much relieved by advancing in age, whereas hypochondriasis usually becomes aggravated.

The two diseases have often been confounded together; but from duly considering the foregoing circumstance, it appears that a proper line of distinction should be drawn between them.

The hysteric passion likewise differs from syncope, as in this there is an entire cessation of the pulse, a contracted face, and a ghastly countenance; whereas in the uterine disorder there is often sometime of a colour, and the face is more expanded; there is likewise a pulse, though languid; and this state may continue two or three days, which never happens in syncope.

It also differs from apoplexy, in which the abolition of sense and voluntary motion is attended with a sort of snoring, great difficulty of breathing, and a quick pulse; which do not take place in hysteric cases.

It differs from epilepsy, in that this is supposed to arise in consequence of a distention of the vessels of the brain; whereas in hysteria, the spasmodic and convulsive motions arise from a turgescence of blood in the uterus, or in other parts of the genital system. Hysteria may be distinguished from epilepsy by the *glubus hystericus*, by the great flow of limpid urine, by the sudden transitions from laughing to crying, and by the fear of death preceding and succeeding to the paroxysm.

However dreadful and alarming an hysteric fit may appear, still it is seldom accompanied with danger; and the disease never terminates fatally, unless it changes into epilepsy or mania, or the patient is in a very weak reduced state.

COMMON TREATMENT.

Bleeding, copiously and repeatedly, sulphate of zink, mercury, antimony, &c. Is it not passing strange, that the very practice should be recommended and pursued by physicians which more often proves an exciting cause of the disease than any thing else. Every one knows that the nervous and the feeble are the subjects to this complaint. With what propriety then, can blood-letting be practised, when it so invariably aggravates the characteristic symptoms of it. I have seen delicate people nearly bled to death, when every successive paroxysm was induced by the very practice.

REFORMED PRACTICE.

In the cure of *hystéria* two indications are to be attended to.

The first is to allay the spasmodic symptoms which constitute the fit; and

The second, to lessen the excitability of the nervous system, and strengthen the whole frame during the intermissions of the paroxysms.

During a fit the patient's dress should be loosened, so that the circulation and respiration may be as little as possible embarrassed; cold water should be sprinkled or rather dashed over the face, the body laid in a recumbent position, with the head elevated, and a current of air admitted into the apartment. The attendants may be employed in rubbing the

temples, abdomen and extremities. Five or six persons are often in the habit of clenching the patient during a hysteric fit, and confining them to the bed, or in a certain position; but this practice should be avoided.

It is best to use only force sufficient to keep the patient from injuring herself, or her attendants. When she suddenly raises and springs from the bed, allow as much latitude, liberty and motion to the body and limbs as possible.

If the patient discovers a disposition to roll upon the floor, to use the language of the late professor Smith of New-Haven; "let her roll."

When called to treat the disease during the paroxysm; the first object will be to suspend or shorten it. To this end, such measures must be adopted as have a tendency to divert the blood from the centre of the circulating system towards the extremities; in other words to *equalize* the *circulation*, and nervous excitement. That there is such unequal circulation, is very evident from the coldness of the extremities, the feet, the hands and the surface, while there is a morbid or altered condition of the head or brain. It will therefore be of the first and greatest consequence to *immerse the feet and legs* in very *warm water*. It is altogether useless to prescribe medicine, until such means have been taken; as are calculated to restore the balance of the circulation, and the nervous influence.

Having attended to the first step in the treatment of hysteria; it will be necessary in the next place, to administer an *antispasmodic*, or such medicine as will aid in cutting short the paroxysm. I have found the following medicine preferable to any other, where there were no symptoms to contra-indicate the use of an emetic. I allude to the *tincture of lobelia*. A table-spoonful may be taken, diluted with a little tea or water between the fits; provided there be an intermission as there usually is in most cases. It acts as a *nervine*, having a powerful tendency to allay the irritability of the nervous system. It removes the rising in the throat, sense of suffocation, and the phlegm or mucus collected upon the stomach, while at the same time, it throws the blood to the surface and extremities, and makes such an impression upon the brain, and nervous system, that the paroxysm is often cut short by a single dose, even under the influence of spasms. Where the teeth are tightly clenched, a small quantity of this tincture introduced into the mouth, and between the teeth; will relax the muscles, and cause the patient to open her mouth and enable her to swallow. Should it be, however, from any causes impracticable, to administer medicine internally, administer the following injection or *clyster*:

Take a strong infusion of Catnip, 1 pint.

Milk, half a pint.

Sweet or Olive Oil, 1 gill.

Molasses, 1 gill.

Laudanum, a small tea-spoonful.

Fine Salt, do. do. Mix.

Let the whole be, if possible, introduced at a time, blood warm, with a French syringe.

This alone rarely fails to moderate the symptoms very speedily; and to induce a complete intermission of the spasmodic action.

It will be necessary also to apply fomentations to the abdomen. The following may be used:

Take Hops, Wormwood, and Tanzy, equal parts.

Boil an hour or two in vinegar and water, and apply to the abdomen; to be often renewed, or as often as it grows cold. This course will soon bring about an intermission of the hysteric fit. I have seldom known a failure where it has been properly attended to.

Should it fail, however, from any cause whatever, give to the patient a pill of opium containing about three grains, or about the size of a pea. This is infallible under all circumstances, and in all cases. I have prescribed it where a number have attended the person, under the influence of hysteric fits for a whole day, and in an hour or two, the patient was free from pain, and convalescent. I have now spoken of the treatment of hysteria during a paroxysm, and having suspended it, our next object will be to prevent a recurrence, which the patient is very liable to; and this must be effected by restoring the tone of the system.

We may commence by giving a moderate *cathartic*. This will cleanse the stomach and bowels and prepare the way for medicine. After the operation of it, an *aperient pill* must be taken to regulate the bowels which, in this complaint, are habitually constipated. For this purpose, I give a mild preparation denominated the *anti-dyspeptic pill*. It acts mildly upon the bowels without leaving them costive, neither does it induce any nausea or griping. Two or three should be taken at bed time, in a little currant jelly or roasted apple, to be continued until the bowels become regular. This is very necessary, as the complaint is often induced by an inactive or torpid state of them, causing fetid gases, and feculent matter to accumulate in the intestines.

During the day, the patient should take from half a wine glass, to a wine glass of the *restorative cordial* or *bitters*. This preparation invariably improves the condition of the patient. It creates an appetite, gives tone and energy to the nervous system, and prevents a recurrence of the hysteric paroxysm. The following infusion may be taken with this preparation.

Take Wild Valerian, or Ladies' Slipper,
Skunk Cabbage. Equal parts.

Add sufficient boiling water to make an infusion, to be taken cold through the day, and particularly with a view to allay that extreme irritability of the nervous system which causes wakefulness or want of sleep, and which, indeed, is one of the characteristic symptoms of the complaint. This infusion is *nervine* and *anti-spasmodic*.

Where we wish to effect a radical cure, a mild emetic may be given once a week. Our common *emetic powders* answer the best purpose of any preparation with which I am acquainted. It is only necessary to excite gentle vomiting, which contributes much towards the cure by imparting tone and energy to the stomach and nerves.

Where the hysteria assumes a lingering or chronic character, mild emetics are very valuable. Dr. Dean of Harrisburg, speaks of their efficacy in the following language. He says, "in some cases where the

patients had laboured under this disease for ten years, and during that time had, by the advice and direction of respectable physicians, exhausted, with at most but temporary benefit, the whole class of remedies which are usually prescribed, I have, by the continued exhibition of vomits, either entirely removed the complaint, or so far interrupted the habits of the diseased action in the stomach, that antispasmodic and tonic medicines would, in general, complete the cure."

Dr. Tidd was very much in the habit of administering the following preparation, which he called, "*hysteric pill*."

Take Gum Assafœtida, four parts.
Salts of Hartshorn, two parts.
Gum Opium, one part.

Dissolve the gum *assafœtida* over a slow fire, then combine it with the *opium*, which should be soft, after add the *salts of hartshorn* made fine. Let the whole be well incorporated together, and rolled into pills of about two grains each. One or two of these to be given at a dose, particularly when there are any cramps or hysteric symptoms.

The above treatment with me has been uniformly and invariably successful. I have been called to the patient when she has been nearly destroyed by the lancet, a succession of paroxysms occasioned by it, irritable, delirious, extremely feeble, countenance almost as white as marble, and by discontinuing such practice, and substituting the course here recommended, a remission of all the hysteric and nervous symptoms have followed with convalescence and recovery.

The following is the preparation so highly extolled and recommended by sir Ashley Cooper :

Take Salts of Hartshorn, (*Carb. Ammonia*,) half dram.
Mint Water, (*Aqua Mentha Viride*,) one and an half ounce.
Com. tint Cardaman, (*Comp. Tinc. Cardaman*,) half an ounce. Mix.

Two table-spoonfuls three times per day,

REGIMEN.

There is no disorder that requires more care and attention as regards diet, soothing or kind treatment, &c.

Nothing harsh, or censorious must be said to the patient, or any thing calculated to arouse the passions or emotions of the mind. She should be kept as quiet and composed as possible.

No sad intelligence suddenly imparted, if at all. The mind to be kept as free as possible from every kind of anxiety.

She must avoid great fatigue or labour. Nursing of infants who are too old, and in short, every cause of debility. She must exercise often in the country, or open air. She must never overload the stomach, but use a nutritious diet, and such as easily digests.

Some years ago, I was called to a young lady of this city, recently from England, or Canada, labouring under this complaint, which had been brought on by adversity, and she had become reduced from a degree of affluence to great poverty, and being ashamed to make known her situation, she submitted to great privation. She was finally assisted by

a religious society, but a sense of her former and present situation, produced great nervous debility, hysterics, with more or less delirium. A physician of this city had greatly aggravated her symptoms by his treatment. He bled her, until her countenance became like marble, her strength gone, confined to the bed with great irritability of the nervous system, &c. Besides the family with whom she resided, did not treat her kindly; all these circumstances rendered her truly miserable. I now reversed the treatment, and received her into my family, endeavoured to treat her with tenderness, in addition to proper medical treatment. The change was surprising, all her unfavourable symptoms vanished; her appetite returned; her flesh, and her reason; strength and spirits; in short, she entirely recovered, and has remained well, at least ten years.

CHAPTER II.

HYPOCHONDRIA, (*Hypochondriasis*.)

DESCRIPTION.

By the term *Hypochondria* is to be understood, a disordered or diseased state of the mind, arising generally from debility of the nervous system, connected usually with dyspeptic symptoms. It is denominated by some, spleen, vapours, low spirits, &c. In this complaint, the patient's mind is harassed with great anxiety, principally from the anticipation of imaginary evils, or from the slightest grounds, and however erroneous, such imaginary troubles may be, there is always the most obstinate belief and persuasion of them. It is the lowest grade of mental derangement.

CAUSES.

This disease seems to depend upon a loss of tone, or energy in the nervous system, induced by various causes, such as close and intense study, long and serious attention to abstruse subjects, the constant remembrance of some material loss or disappointment which has occurred, great anxiety of mind, leading an inactive, indolent, or sedentary life, immoderate venery, or a use of crude, flatulent, or unwholesome food, being guilty of great irregularity and intemperance, and by long-continued evacuations.

The affections of the abdominal viscera with which this disease is usually complicated, have been often treated of as standing in the relation of causes, while, in reality, they should be arranged among its occasional symptoms. That such is really the case, is clearly proved by a consideration of the exciting causes of the disease, which operate upon the system through the medium of the brain. These are the depressing

passions, fear, grief, and despondency, habits of indolence quickly succeeding to a life of industry and employment, long-continued and excessive exertions of the intellectual faculties. The sympathetic derangements consequent on hypochondriasis, are not, however, confined to the abdominal viscera; for nothing is more common than to meet, in such cases, with palpitations of the heart, difficulty of respiration, and chronic cough.

Hypochondriasis and other nervous complaints are, through the medium of sympathy, scarcely less infectious (it is probable) than febrile diseases; and even persons naturally of a cheerful temper, by being long domesticated with those of a melancholy desponding cast, have been known to become decidedly and often deplorably dejected.

SYMPTOMS.

This disease is attended with inactivity, a want of resolution with respect to all undertakings, lowness and dejection of spirits, great despondency, and apprehension of evil upon the slightest grounds, and a dread of danger from any unusual feeling even of a trifling kind, together with flatulency in the stomach and bowels, acid eructations, costiveness, a copious discharge of pale urine, spasmodic pains in the head and other parts of the body, giddiness, dimness of sight, and palpitations. In short, it is attended with such a long train of symptoms, that it would fill many pages to enumerate them all, as there is no function or part of the body that does not suffer in its turn by its tyranny; the miserable patient indulges wild imaginations, and fancies that he labours under almost every disease; and with respect to these feelings and apprehensions, he entertains the most obstinate belief, being highly displeased if any attempt is made to reason with him on the absurdity of his persuasions.

Dr. Rush has given an admirable description of this disease in the following language:

The symptoms of this form of derangement as they appear in the body are, dyspepsia; costiveness or diarrhoea, with slimy stools; flatulency of urine.

The characteristic symptom of this form of derangement, as it appears in the mind, is *distress*, the causes of which are numerous, and of a personal nature. I shall enumerate some of them, as they have appeared in different people. They relate to the patient's body. He erroneously believes himself to be afflicted with various diseases, particularly with consumption, cancer, stone, and above all, with impotence, and the venereal disease. Sometimes he supposes himself to be poisoned, or that his constitution had been ruined by mercury, or that the seeds of the hydrophobia are floating in his system.

He believes that he has a living animal in his body. A sea captain, formerly of this city, believed for many years that he had a wolf in his liver. Many persons have fancied they were gradually dying, from animals of other kinds preying upon different part of their bodies. He imagines himself to be converted into an animal of another species, such as a goose, a cock, a dog, a cat, a hare, a cow, and the like. In this

case he adopts the noises and gestures of the animals into which he supposes himself to be transformed.

He believes he inherits, by transmigration, the soul of some fellow creature, but much oftener of a brute animal. There was a madman in the Pennsylvania Hospital, who believed that he was once a calf, and who mentions the name of the butcher that killed him, and the stall in the Philadelphia market on which his flesh was sold previously to his animating his present body.

He believes he has no soul. The late Dr. Percival communicated to me, many years ago, an account of a dissenting minister in England, who believed that God had annihilated his soul as a punishment for his having killed a highwayman, by grasping him by the throat, who attempted to rob him. His mind was correct upon all other subjects.

He believes he is transformed into a plant. In the *Memoirs of the Count de Maurepas*, we are told this error took possession of the mind of one of the princes of Bourbon to such a degree, that he often went and stood in his garden, where he insisted upon being watered in common with all the plants around him.

The patient afflicted with this disease sometimes fancies he is transformed into glass.

Galen and Avicenna make mention of people who have fancied themselves earthen pots, and therefore have carefully avoided being touched, for fear they should be broken.

Dr. Ferriar records the case of a young lady, who fancied herself accompanied by her own apparition, and who, therefore, may be justly said to have been, beside herself.

Bartholinus, Lemnius, and others, speak of a man, who was persuaded that his nose was grown to that prodigious length and greatness, that it was a great hindrance. The physician cured him by holding concealed a long stuffed thing like a sausage to his nose, and taking hold of the invalid's nose, scratched that with an instrument, dexterously pretending he had whipped off the excrescence.

He believes, that by discharging the contents of his bladder, he shall drown the world.

He believes himself to be dead.

It is worthy of notice, in all these cases of erroneous judgment, the patients reason correctly, that is, draw just inferences from their errors. Thus the prince of Bourbon, when he supposed himself to be a plant, reasoned justly when he insisted upon being watered. In like manner, the hypochondriac who supposes himself to be dead, reasons with the same correctness when he stretches his body and limbs upon a bed or a board, and assumes the stillness and silence of the shroud.

It is remarkable further, that all the erroneous opinions, persons affected with this form of derangement entertain of themselves, are of a degrading nature.

But again. The distress of a hypochondriac is derived from errors respecting his outward circumstances as they relate to his property.

The conduct of his friends, relations, or a mistress.

His birth place, and society of his family, when absent from them. The state of his country. His spiritual state.

The mind, in its distress from all the above causes, is in a reverse state from that which was just now mentioned, in drawing erroneous, or disproportionato conclusions from just premises. Thus the hypochondriac who possesses an income which he admits to be equal to all the exigencies of his family, reasons unjustly when he anticipates ending his days in a poor-house. In like manner the deranged penitent judges correctly when he believes that he has offended his Maker, but he reasons incorrectly when he supposes he has excluded him from his mercy.

In the hypochondriasis from all the causes that have been mentioned, the patients are for a while peevish and sometimes irascible. The lightest noises, such as the grating of a door upon its hinges, or its being opened and shut suddenly, produce in them anger or terror. They quarrel with their friends and relations. They change their physicians and remedies, and sometimes they discover the instability of their tempers by settling and unsettling themselves half a dozen times in different parts of their native country, or different foreign countries, in the course of a few years, leaving each of them with complaints of their climate, provisions, and the manners of their inhabitants.

The hypochondriasis, or tristimania, like most other diseases, has paroxysms, and remissions or intermissions, all of which are influenced by many circumstances, particularly by company, wine, exercise, and, above all, the weather.

A pleasant season, a fine day, and even the morning sun, often suspend the disease. Mr. Cowper, who knew all its symptoms by sad experience, bears witness to the truth of this remark, in one of his letters to Mr. Haley. "I rise," says he, "cheerless and distressed, and brighten as the sun goes on." Its paroxysms are sometimes denominated "low spirits." They continue from a day, a week, a month, a season, to a year, and sometimes longer. The intervals differ in being accompanied with preternatural high spirits. In being attended with remissions only; and, with intermissions, or, in other words, with correctness and equanimity of mind.

The extremes of low and high spirits which occur in the same person, at different times, are happily illustrated by the following case. A physician in one of the cities of Italy was once consulted by a gentleman, who was much distressed with a paroxysm of this intermitting state of hypochondriasm. He advised him to seek relief in convivial company, and recommended to him in particular to find out a gentleman of the name of Cardini, who kept all the tables in the city, to which he was occasionally invited, in a roar of laughter. "Alas! Sir," said the patient, with a heavy sigh, "I am that Cardini." Many such characters, alternately marked by high and low spirits, are to be found in all the cities in the world.

But there are sometimes flashes of apparent cheerfulness, and even of mirth, in the intervals of this disease, which are accompanied with latent depression of mind. This appears to have been the case in Mr. Cowper: hence, in one of his letters to Mr. Haley, he says, "I am cheerful

upon paper, but the most distressed of all creatures." It was probably in one of these opposite states of mind that he wrote his humorous ballad of John Gilpin.

In the history of hypochondriasm, as far as it has been given, there is a combination of some of the symptoms of hysteria, from the nervous system being partially or alternately in a strictum or laxum, or in other words, in an irritable or irritable state, and from the blood-vessels being alternately in a diseased and sound state.

DISCRIMINATION.

It is necessary to discriminate between this complaint and other nervous affections, particularly hysteria. The latter complaint is attended with spasms or paroxysms; sense of rising and fullness of the throat, alternative fits of laughing and crying, and which affects women more than men while in hypochondriasis, these symptoms are not present. Besides it is generally attended with costiveness or diarrhoea, and continued distress or anxiety of mind, and which are transient affections only in hysteria.

Men of a melancholic temperament, whose minds are capable of great attention; and whose passions are not easily moved, are at an advanced period of life, most apt to be attacked with hypochondriasis, and when it has once taken place; it goes on increasing as life advances, being usually most troublesome in the fall and winter seasons.

PROGNOSIS.

As to the prognostic, the disease, if recent, is rather to be regarded as troublesome than dangerous; but if long continued, it is apt to produce schirrhi of the viscera, cachexy, dropsy, incurable melancholy; or madness:

DISSECTION.

On dissections of hypochondriacal persons, some of the abdominal viscera, (particularly the liver and spleen,) are usually found considerably enlarged. In some few instances, effusion, and a turgescence in the vessels, have been observed in the brain.

COMMON TREATMENT.

Bleeding, iron; mercury, blistering, &c.

REFORMED PRACTICE.

Indications of Cure.—1. Restore the nervous energy:

2. Mitigate or remove the exciting causes of the complaint.

3. Give tone to the stomach and alimentary canal, and promote the secretions.

The complaints of hypochondriacs should be treated as of real existence, and from whatever cause they may arise, it is our duty to employ art to remove it. Nor should we ruffle an irritable mind by levity, or expose a morbid sensibility to insult and reproach.

Compassion, and not raillery, is to be bestowed on the hypochondriac; as the firm persuasion which he entertains will not allow his feel-

ings to be treated as imaginary, nor his apprehension of danger to be considered as groundless, however the physician may be of opinion that it is the case in both respects. To gain his confidence, it will be necessary to attend to his complaints, as if they were real.

The remedies for this form of derangement divide themselves into two classes.

I. Such as are intended to act directly upon the body; and,

II. Such as are intended to act indirectly upon the body, through the medium of the mind.

Before we proceed to administer the remedies that are indicated under our first head, it will be proper carefully to review the history of all the remote and exciting causes of this disease, and, when possible, to remove them.

As regards medicine, we may commence by administering to the patient a mild *emetic*. A dram of the *radix ippecacuanha*, pulverized, may be given, and its operation aided by the common *chamomile*, or which is as good, or preferable, *wild chamomile*, or May-weed, (*anthemis cotula*,) and it may be repeated; if the disease is obstinate, every week. The day after the exhibition of the emetic a portion of our *common physic* may be given. These medicines will cleanse the stomach and bowels, and impart new action and tone to them, which is indispensably necessary in the cure of this complaint.

It will be proper, in treating the disease, afterwards, to give mild *laxatives* to regulate the bowels; and for this purpose, there is nothing better than the *anti-dyspeptic pill* to be occasionally given at bed time.

It corrects a morbid state of the stomach and intestines, and very gently excites a natural or peristaltic action or motion, and thus gives tone and energy to the nervous system.

The next class of medicines to be given, will be corroborants, or tonics. Such as the *Restorative Cordial*, or *Wine Bitters*.

The patient may take from a table-spoonful to half a wine glass, morning, noon, and night, to be accompanied with an infusion of the wild *valerian*. The body should be frequently bathed, as well as the feet, and for pain in the head or other parts, *fomentations* and a *Mustard Plaster* should be applied to the seat of irritation, except it be in the head when the *Rubefacient* should be applied between the shoulders.

When the patient is troubled with flatulence or any spasmodic affections of the head or stomach arising from it, or when there is great depression of mind, the following mixture may be given.

Take Spirits of Camphor, 20 drops.

Spirits of Hartshorn, 10 drops.

Compound spirits of Lavender, a tea-spoonful. Mix.

Let the whole of this be taken in half a tumbler of *Fennel Seed tea*.

This mixture will remove flatulence, nervous irritation, and exhilarate the spirits. It may be repeated when there is an occurrence of similar symptoms.

When the disease proves very obstinate, not readily yielding to this course, pure *opium* will be found a most invaluable remedy. It will sometimes act like a charm when all other means fail. Cowper, who was very

subject to this complaint, states that a preparation of it saved him from being devoured by melancholy. It calms the irritability of the nervous system by raising the tossed or depressed powers of the brain. The patient may commence by taking a half grain pill once or twice a day, according to the symptoms of the complaint. Should costiveness arise from the use of it, the aperient pills must be taken to obviate it.

To aid the cure, or as an auxiliary, good old *Wine* must occasionally be taken, but such must be selected as will not cause acidity of the stomach, and in general the sweet wines are best, such as Malmsay, Muscat, and Malaga. If they disagree with the stomach, they must be omitted.

The tepid and the shower bath may be used with advantage, as well as sea bathing.

Opium, however, for obvious reasons should be the last remedy resorted to.

A remarkable cure was effected by the use of opium, in the case of Mr. Hezekiah Reynolds of Wiallingford, Connecticut. He had been a miserable hypochondriac for three years. He had applied to a number of physicians without ever having received any benefit. In this condition, opium was prescribed, of which he was directed to take from half a grain to a grain daily, which was gradually increased. This medicine had the desired effect, and restored him to health. Speaking of the cure, he exclaimed, "this is the medicine (opium) which has reached my disease."

When the mind is so diseased, that the patient imagines he has a living animal in his body, or something of the kind, he must be indulged in this belief, and apparent, or deceptive means, taken to destroy it, or to remove whatever cause of this nature may exist.

Great attention must be given to the mind. The person afflicted with this disease, should be recommended to read the bible, particularly the New-Testament. He should be recommended to seek relief in obedience to the precepts of religion, or if they have no relish for this, recommend the perusal of interesting histories and narratives. *Traveling* has a powerful influence upon the mind of hypochondriacs; the change of *scenery*, constant succession of new objects, together with the restoration of the excretions; the natural circulation of the blood; all tend to remove the morbid or diseased state of the imagination.

Gardening and *agriculture* have a great tendency to remove this complaint. While it engages the mind, and calls it from objects of gloom, it invigorates and strengthens the bodily powers. It seldom fails to create a keen appetite which indicates a healthful state of the stomach, and consequently the tone of the nervous system is improved.

If possible, the patient should reside where the scenery is pleasant and cheering, and near the water is always preferable, as it affords enlivening sensations to the mind, while it affords opportunities for agreeable amusements, pleasant walks, sailing, fishing, &c.

A writer on this subject has the following remarks:—"The patient's attention is to be engaged and diverted to other subjects than his own feelings; he is to be directed to vary the scene frequently by going from one place to another; to associate as much as possible with agreeable

cheerful company ; to engage in such pursuits as will afford him moderate exercise in the open air, which gardening, and riding on horseback, are particularly calculated to do ; and by all means to avoid absolute idleness ; but in doing this, all applications to former studies, especially professional ones, is to be forbid : entertaining books will, however, be serviceable, as assisting to divert the mind from itself. Gardening is a pursuit highly proper for hypochondriacs, as it will keep the mind alert and the body in exercise : such as live in the country should therefore engage in it. In cities or large towns where this healthy recreation cannot be enjoyed, no better substitute can be employed than that of fitting up an apartment as a work-shop. Working in a cool and free atmosphere would prove a deliverance from that chilliness which for above half of our year so miserably persecutes the tender, and it might act equally as a charm on the ruffled spirits.

When the hypochondriasis proceeds from the influence of any one passion, exciting an opposite one will sometimes remove it, or when it proceeds from attachment to an object, changing it to some other will remove it, as in disappointed love.

A striking case occurred in Connecticut, where the affections of a young man were placed upon a coquette who deceived him. He became affected with the hypochondriac disease which rendered him very unhappy and miserable. He opened his mind to a friend who advised him to place his affections upon some other female which he did. He travelled south, was taken ill, and became attached to the person who nursed him during his sickness, and afterwards married her, the effect of which was an entire change in his mind. His complaint left him, and he has remained perfectly well ever since.

REGIMEN.

The regimen in the *Hypochondriac* disease, should be such as is easily digested. Such vegetables must be avoided as create flatulence.— Meals should be taken regular, and regular hours should be kept. Fatigue and excessive labour should be avoided, and every thing calculated to excite the passions or depress the mind.

Red Pepper or *Capsicum*, *Mustard*, and salt may be freely used. They act as stimulants and tonics. Strong coffee and tea must be avoided, as well as ardent spirits.

CHAPTER III.

PALSY. (*Paralysis.*)

DESCRIPTION.

PALSY is a disease principally affecting the nervous system, characterized by a loss or diminution of motion or feeling, or of both, in one or more parts of the body. When one entire side of the body, from the head downwards, is affected, it is distinguished among professional men by the name of hemiplegia. If one half of the body, taken transversely, by the seat of the disease, it is named paraplegia; and when confined to a particular limb, or set of muscles, it is called a paralysis.

CAUSES.

It may arise in consequence of an attack of apoplexy. It may likewise be occasioned by any thing that prevents the flow of the nervous power from the brain into the organs of motion; hence tumours, overdistention, and effusion, often give rise to it. It may also be occasioned by translations of morbid matter to the head, by a suppression of usual evacuations, and by the pressure made on the nerves by uxations, fractures, wounds, or other external injuries. The long continued application of sedatives will likewise produce palsy, as we find those, whose occupations subject them to the constant handling of white lead, and those who are much exposed to the poisonous fumes of metals or minerals, are very apt to be attacked with it. Whatever tends to relax and enervate the system, may likewise prove an occasional cause of this disease.

SYMPTOMS.

Palsy usually comes on with a sudden and immediate loss of the motion and sensibility of the parts; but, in a few instances, it is preceded by a numbness, coldness, and paleness, and sometimes by slight convulsive twitches. When the head is much affected, the eye and mouth are drawn on one side, the memory and judgment are much impaired, and the speech is indistinct and incoherent. If the disease affects the extremities, and has been of long duration, it not only produces a loss of motion and sensibility, but likewise a considerable flaccidity and wasting away in the muscles of the parts affected.

HEMIPLEGIA, OR, PALSY OF ONE SIDE.

THE most perfect form of cerebral palsy is *Hemiplegia*; in which the affection extends over the whole of one side of the body, from the

head to the foot. Sometimes it takes the form of *paraplegia*, or palsy of the lower extremities; and, in some rarer instances, the affection is confined to the loss of function in a particular nerve.

Hemiplegia, to which form of the disease the term *Palsy* is in common language appropriated, has generally been considered as a minor degree of apoplexy. The attack of it is sometimes unexpected, but more commonly it is preceded for several days, or even weeks, by one or more of those symptoms formerly described as the forerunners of apoplexy; such as giddiness, drowsiness, numbness, dimness of sight, failure of the powers of mind, forgetfulness, transient delirium, or indistinctness of articulation. For the most part, the paralytic seizure is sudden; but occasionally the approaches of the disease are made more slowly; a finger, a hand, or an arm, the muscles of the tongue, of the mouth, or of the eyelids, being first affected, and the paralytic state gradually extending to distant parts. It is a common observation, that hemiplegia is, in most instances, preceded by a genuine fit of apoplexy; but this opinion will hardly be borne out by facts; and it is rendered improbable by a comparison of the frequency of palsy, with the rarity and acknowledged fatality of apoplexy. It is true, that the patient, on occasion of the paralytic *stroke*, is often observed to labour under more or less of temporary lethargy, but the apoplectic paroxysm is hardly ever complete. It will be found in practice, that palsy is much more commonly the *precursor*, than the *consequence* of apoplexy.

It has often been remarked, as a very singular circumstance, that in hemiplegia, as well as in other varieties of palsy, the power of sensation should remain perfect, while that of voluntary motion is wholly lost.

PARAPLEGIA, OR, PALSY OF THE LOWER EXTREMITIES.

Paraplegia, or palsy of the lower half of the body, though far less frequent than hemiplegia, ranks next in importance to it. The loss of nervous power is here entirely confined to the pelvis and lower extremities.

“This affection,” says Gregory, “sometimes arises from local causes injuring the spinal marrow; but it is as a disease depending upon some morbid state of the cerebral system, that I am now to consider it. Dr. Baillie is, I believe, the first who fully established the important pathological principle which I am now to illustrate, and to his paper I am indebted for the following outline of this variety of palsy.”

Cerebral paraplegia occurs chiefly in the middle or more advanced periods of life, and is more frequent in men than women. The approach of the disease is never sudden; at first there is only a sense of numbness, with a stiffness or awkwardness of motion in the lower limbs; but by degrees the patient is unable to walk without support. As the disease advances, the urine passes off, at first in a feeble stream, at length involuntarily. The bowels are costive, but from loss of power over the sphincters, the motions frequently pass unrestrained by the will. Patients in this complaint may live for a long time; but at the end of

some years they usually die with their constitutions entirely exhausted. In a few instances recovery takes place.

The connection of these symptoms with disease of the brain has been in some cases proved by dissection; and in others it has been rendered almost equally certain by the general symptoms of cerebral disease present at the same time. Dr. Baillie has seen paraplegia accompanied by giddiness, drowsiness, impaired vision, paralytic dropping of an eyelid, defect of the memory, loss of mental energy, and lastly, numbness and weakness of one or both of the upper extremities. These circumstances afford strong evidence that the cause of the disease exists within the cavity of the skull, and that it consists in some mode of pressure upon the brain.—[Gregory.]

PARTIAL, OR, LOCAL PALSY.

THERE are a variety of cases in which the loss of nervous power is confined to a particular organ, or muscle, or set of muscles; and yet from the manner in which the affection begins, from the symptoms which attend it, and the course which it afterwards runs, it is obvious that the source of the mischief must be sought for in the great centre of the nervous system. Innumerable degrees of paralytic affection may be observed in practice, from the torpor and weakness of a single finger, up to complete apoplexy, in which sense and motion perish throughout the whole body. To enumerate these different partial palsies would be unnecessary; it is sufficient to say, that among the most frequent will be found amaurosis, or palsy of the optic nerve, palsy of the muscles of one side of the face, palsy affecting only the muscles of deglutition, or the neck of the bladder, and palsy of an arm, a hand or a finger. It is wholly beyond our power to comprehend how it happens that a cause, operating upon the brain generally, should produce effects so partial and at such a distance from the actual seat of disease.

SHAKING PALSY.

A few lines may be devoted to the consideration of that nervous affection which has been called shaking palsy, the *paralysis agitans* of some nosologists. In this disease the muscles of one or both the superior extremities are in a state of continual tremor. By degrees the trembling extends to one or both legs, and the patient walks with increasing difficulty. The body is bent forward. Articulation is indistinct, mastication troublesome, and at length the saliva dribbles from the mouth. As the muscular weakness increases, the agitation of the body becomes more and more vehement, continuing even during sleep. Delirium, drowsiness, and other marks of exhaustion, precede the fatal event. The complaint often lasts for many years, without impairing in any degree the

mental faculties. Such a condition of nervous disorder is peculiar to persons advanced in life. Nothing is known regarding its remote causes. It is conceived to depend on some morbid state of the medulla oblongata and upper portions of the spinal marrow.

PROGNOSIS.

When palsy attacks any vital part, such as the brain, heart, or lungs, it soon terminates fatally. When it arises as a consequence of apoplexy, it generally proves very difficult to cure. Paralytic affections of the lower extremities ensuing from any injury done to the spinal marrow, by blows and other accidents, usually prove incurable. Palsy, although a dangerous disease in every instance, particularly at an advanced period of life, is often removed by proper treatment.

DISSECTION.

The morbid appearances to be observed on dissections in palsy are pretty similar to those which are to be met with in apoplexy; hence, collections of blood, and of serous fluids, are often found effused on the brain, but more frequently the latter; and in some instances the substance of this organ seems to have suffered an alteration. In palsy, as well as in apoplexy, the collection of extravasated fluid, is generally on the opposite side of the brain to that which is affected.

COMMON TREATMENT.

Among other means used, are bleeding, mercury, &c.

REFORMED PRACTICE.

In case the disease should attack the patient suddenly and violently, the same course must be pursued as in *apoplexy*.

Spasmodic symptoms are very common in this complaint. The person is seized with a violent twitching of the muscles of the face, generally those on one side of it, which occasions very great distress. For this symptom, and to allay the spasm and pain, I have formed the following mixture effectual.

Take Ether, (*Æther Sulphuricus*,) one part,
Laudanum, (*Tinct. Opii*,) one part,
Spirits of Camphor, (*Tinct. Camphoræ*,) one part. Mix.

Of this mixture give a tea-spoonful in a tumbler of *hop tea*, or any other kind as a substitute, every half hour, until the spasms subside.

During the intermission, the patient must take such medicines as are calculated to promote and equalize the circulation, and purify the blood. For this purpose, the following stimulating liquid should be applied externally, and taken internally.

Take Capsicum, half ounce.
White Mustard, pulverized, half ounce,
Alcohol, or fourth proof Brandy, one quart. Mix.

After the strength is extracted, the patient may take a small tea-spoonful of this in a tumbler of any kind of tea, two or three times a day.

The parts affected must be as often bathed with flannel. Let poultices, or plasters composed of equal parts of *Pepper*, *Mustard*, and *Indian Meal*, moistened with vinegar, be applied to the feet, between the shoulders, and on the parts affected.

Purgatives in palsy will be found very useful. One may be given two or three times a week, or as occasion requires. They rarely fail of proving beneficial to the patient.

"Purging," says Dr. Dewees, "should be pretty constantly maintained, especially in recent cases, to break in upon, and to prevent the habit of determination to the head, and this is of more consequence than might at first be imagined; for it is in the commencement of such attacks that such accumulations are most to be feared: and we very effectually overcome this disposition from fixing on the brain, by diverting the flow of blood from it, and throwing it upon the intestines from whence it can be more easily discharged by cathartics, than from the brain, when the determination sets that way."

It is sometimes the case, however, that the lower portion of the system is in such a torpid, or paralytic state, that no purgatives will act upon the bowels. When this symptom is present, stimulating injections or clysters must be administered.

The following is excellent.

Take Red or Cayenne Pepper, one tea-spoonful,
Lobelia, two tea-spoonfuls.

Add a pint of boiling water. After standing a sufficient length of time to extract the strength, sweeten with molasses, add half a pint of milk, and a gill of sweet oil. Let it be given warm, and as much of it as the patient can bear. This will excite action in the bowels, and promote evacuations.

I have seen patients where the fæces have been so hardened that instruments were required to remove them. In such cases nothing is more valuable than injections of this kind.

It is very necessary in this complaint to use frictions. The parts must be rubbed for twenty or thirty minutes, two or three times a day. Where the feet or any other part swells, let them be frequently steamed over bitter herbs. This I have found very useful. When the disease is seated in any particular part, more than another, I have found stimulating plasters very useful. None is better than our common *strengthening plaster*, more particularly in consequence of the *capsicum* and *camphor* it contains.

If the patient does not grow better under the above treatment, give the *alterative syrup*. This medicine acts as an alterative, and seems to improve that morbid or viscid state of the blood, which is probably one of the exciting causes of the complaint. During the use of it, let the parts be bathed with the following liniment, or oil:

Take Oil of Turpentine,
Oil of Hemlock,
Oil of Sassafras,
Oil of Sparmiut,
Olive Oil,
Oil of Wormwood,
Oil of Camphor. Equal parts. Bathe three or four times a day.

For wakefulness, pain, inquietude, &c. an *anodyne* may be given at bed-time. The *saturated tincture of hops*, may likewise be given, particularly where preparations of opium disagree with the person. The tincture of *hyosiamus* is also very good.

Electricity has been highly extolled for the cure of palsy, and in some cases, it appears to have been successful, in others, injurious. I have seen both effects arise from its application. The most benefit which I have seen from it, has been where the disease was confined to particular parts. Recourse may be had to it, if other means fail; or it may be tried in conjunction with other means. Few, or no shocks, however, should be given, and should it prove the least injurious, it ought to be immediately discontinued. *Nervines* are sometimes useful in palsy, and none is better than the *wild valerian*, or *ladies' slipper*. It may be given in the form of extract or decoction.

REGIMEN.

In the palsy which arises in persons of a full habit, the diet should be light and spare; but when the disease proceeds from relaxation or debility, which is generally the case, or makes its attack at an advanced period of life, it ought to be invigorating and warm, being seasoned with spicy and aromatic vegetables, as *mustard*, *horse-radish*, &c. The drink may be some generous wine, brandy and water, or mustard whey.

Exercise is of great importance in palsy; if the patient is capable of walking he should take his exercise daily; but if deprived of the use of his legs, he ought then to be carried abroad in a carriage of some kind, and none can be more appropriate than chairs upon wheels, on account of the facility of placing the patient in them, and their being drawn about by an attendant. Flannel should always be worn next the skin, and cold, moist, or damp air be avoided. In the winter paralytic persons should remove to a warmer climate, if circumstances will admit of it.

CHAPTER IV.

ST. VITUS' DANCE. (*Chorea Sancti Viti.*)

DESCRIPTION.

THIS singular disease is characterized by a twitching and convulsive action of certain muscles, usually confined to one side of the system, and it affects principally, the arm and leg. It is said that it received its name in Germany in consequence of persons who suspected themselves to be afflicted with this curious convulsion, performing an annual pilgrimage to the chapel of St. Vitus near Ulm, to which women labouring under certain nervous affections were in the habit of resorting every spring, where they danced violently and unremittingly from morn-

ing to night until they sunk down, completely exhausted, into a swoon, or a kind of ecstasy, by which exercise they fancied themselves cured for one year. Some writers place its origin at a much earlier date, deducing it from the very remarkable dancing mania which prevailed throughout Germany in 1374, and which, as it was thought to be the malicious doings of Satan, was generally treated by exorcism; and it is said that the monks of the convent of Korbey were particularly fortunate in casting out the fiend under the holy influence of their patron, St. Veit.

Some divide this complaint into two species, viz. *primary* and *symptomatic*. It is chiefly incident to young persons of both sexes, but particularly those of a weak constitution, or whose health and vigour have been impaired by confinement, or by the use of scanty and improper nourishment; and makes its attacks between the age of ten and fifteen, occurring but seldom after that of puberty.

By some physicians it has been considered rather as a paralytic affection than as a convulsive disorder, and has been thought to arise from a relaxation of the muscles, which being unable to perform their functions in moving the limbs, shake them irregularly by jerks.

CAUSES.

This disease may arise from various causes; from morbid condition of the stomach, as teething, worms, acidity in the bowels, offensive smells, violent affections of the mind, as anger, fear, &c.

It may arise also from debility, from extreme irritability of the nervous system, and sometimes it arises, it is said, from sympathy, check of perspiration, poisons, &c.

SYMPTOMS.

The fits are sometimes preceded by a coldness of the feet and limbs, or a kind of tingling sensation that ascends like cold air up the spine; and there is a flatulent pain in the left hypochondrium, with obstinate costiveness. At other times the accession begins with yawning, stretching, anxiety about the heart, palpitations, nausea, difficulty of swallowing, noise in the ears, giddiness, and pains in the head and teeth, and then come on the convulsive motions.

These discover themselves at first by a kind of lameness or instability of one of the legs, which the person draws after him in an odd and ridiculous manner, as if it was paralytic; nor can he hold the arm of the same side still for a moment; for if he lays it on his breast, or any other part of his body, it is forced quickly from thence by an involuntary convulsive motion. If he is desirous of drinking, he uses many singular gesticulations before he can carry the cup to his head, and it is forced in various directions, till at length he gets it to his mouth, when he pours the liquor down his throat with great haste, as if he meant to afford amusement to the by-standers. Sometimes various attempts at running and leaping take place, and at others the head and trunk of the body are affected with convulsive motions. The eye loses its lus-

tre and intelligence, and the countenance is pale and expressive of vacancy; deglutition is occasionally performed with difficulty, and articulation is often impeded, and sometimes completely suspended. In the advanced periods of the disease, flaccidity and wasting of the muscular flesh take place, the consequence of constant irritation, of abated appetite, and impaired digestion.

In many instances the mind is afflicted with some degree of fatuity, and often shows the same causeless emotions, such as weeping and laughing, which occur in hysteria.

When the disease arises in children, it usually ceases again before the age of puberty, and in adults is often carried off by a change from the former mode of life. Unless it passes into some other disease, such as epilepsy, or its attacks are very violent, it is rarely attended with danger.

Sydenham gives the following description of this complaint:

"It is," says he, "a kind of convulsion which principally attacks children of both sexes, from ten to fourteen years of age. It first shows itself by a lameness or rather unsteadiness of one of the legs, which the patient draws after him like an idiot, and afterwards affects the hand on the same side, which being brought to the breast, or any other part, can by no means be held in the same posture for a moment, but is distorted or snatched away by a kind of convulsion into a different posture or place, notwithstanding all possible efforts to the contrary. If a glass of liquor be placed in the hand to drink, before the patient can get it into his mouth, he uses a thousand odd gestures; for not being able to carry it into a straight line thereto, because his hand is drawn different ways by the convulsions; as soon as it has reached his lips, he throws it suddenly into his mouth, and drinks it very hastily, as if he only meant to divert the spectators."

Another writer gives the following description of this complaint:

"Its approaches are commonly slow. An awkward dragging of the leg, twitches of the muscles of the face, and unsteadiness of the fingers, precede the more general convulsive motions which characterize the confirmed state of the disease."

"The contortions and gesticulations of the patient render him a singular but painful object of observation. All the muscles of voluntary motion are at different times and in different instances affected. Those of the face, neck, and extremities, more particularly suffer. The hands and arms are in constant motion. He can grasp no object, even with the strongest exertions of his will; he walks unsteadily; but with all this, there is no symptom of pain or uneasiness. The expression of countenance, though grotesque, is, in the early stage of the disease, that of good humour and contentment."

"The convulsive agitations vary in violence, and are subject to occasional exacerbations. During sleep (unless in very bad cases) they cease altogether. As the complaint advances, articulation becomes impeded, and is very often completely suspended. Deglutition also is occasionally performed with difficulty. The eye loses its lustre and intelligence. The face is thin and pale, and expressive of a languor and vacancy, which in severe and protracted cases approaches nearly to

fatuity. The mind, indeed, partakes, in some instances, of the bodily disorder, and the mental faculties retrograde to those of infancy."

"With these evidences of disturbance of the cerebral functions, are usually united very unequivocal marks of a deranged condition of the stomach and bowels. A variable and often ravenous appetite, a swelling and hardness, or sometimes flabbiness of the abdomen, with constipation, accompany in a large proportion of cases the onset of the disease. In its advanced periods we may observe impaired digestion, a very offensive state of the alvine evacuations, and flaccidity and wasting of the muscles throughout the body."

COMMON PRACTICE.

Bleeding, blistering, flowers of zinc, lunar caustic, &c.

REFORMED PRACTICE.

The indications in this complaint are:—1. To remove the exciting causes.

2. To remove the constipated state of the bowels and regulate their functions.

3. To strengthen the general system.

First, If upon inquiry, the stomach is found deranged, administer half a dram of *rad. ippecacuanha*, pulverized, to be accompanied with a tea of common *May-weed*, *wild* or *common chamomile*. This will evacuate the stomach, and impart new tone to it, as well as the nervous system. The day after this emetic has been exhibited a moderate purgative may be given, to be repeated weekly. From the sympathetic effect of this class of medicines, they are very valuable in choera.

After having thus cleared the stomach and bowels, and created in them a more healthy action, the following corroborative or restorative preparation should be given:

Take Columbo Root, pulv.
 Spikenard do.
 Gentian do.
 Comfrey do.
 Chamomile Flowers, of each a dram.

Bruise, and cover with boiling water, then add one quart of sweet wine. Of this, let the patient take from half to a wine-glass, morning, noon, and evening, before eating. During the day, an infusion of the *wild valerian* may likewise be taken. Mild and laxative pills to be taken at night, and in sufficient number to regulate the bowels. Two or three every day or two, is usually sufficient. The *anti-dyspeptic pill* answers a very valuable purpose. It imparts tone and energy to the system, while it carries off all feculent matter from the intestines. The feet should be occasionally bathed, and the surface of the body, if the skin is usually dry.

The following infusion used with the other means recommended, (and probably used alone) is a specific in this disease. I know not of a single case in which it has failed to effect a cure:

Take Scullcap, (*Scutellaria Lateriflora*,) 1 oz.
Boiling Water, 1 quart.

Strain, and sweeten with loaf sugar. Let the patient drink of this freely through the day, and to be constantly drank alternately with the tea of *valerian*, before mentioned. I have found this treatment invariably successful. One case occurred in a woman fifty years of age, who had had the complaint a length of time, had been treated by seven or eight physicians without benefit, and after submitting to the use of the above remedies, (emetics excepted,) she recovered.

The *scullcap* appears to have specific effects in this, and most other nervous complaints.

REGIMEN.

A diet that is nutritious and easy of digestion must be used, and every thing calculated to excite mental affections.

CLASS VII.

GASTRIC DISEASES.

CHARACTER.

GASTRIC diseases include such as are more especially or apparently located in the stomach, or have their origin in this organ.

CHAPTER I.

CHOLERA MORBUS. (*Cholera Morbus.*)

DESCRIPTION.

CHOLERA MORBUS is a disease of the stomach and alimentary canal, characterized by vomiting and purging, with severe griping, pain, cramps in the stomach, abdomen, and extremities. It is very prevalent in this climate, particularly during hot weather, and much more so in the East and West Indies.

CAUSES.

Various have been the causes assigned for the production of this disease. Most writers, however, (particularly the ancients) agree, that it depends primarily upon an undue, increased, or vitiated secretion of bile irritating the stomach and bowels. Cullen says that the disease depends upon increased secretion of bile and its copious effusion into the alimentary canal, and as in this way, it irritates and excites the motions above mentioned, he infers, that the bile is thus effused in a larger quantity, and is at the same time of a more acrid quality than usual.

Darwin says, that not only the stomach, but also the duodenum and ilium, as low as the valve of the colon, have their motions inverted; and great quantities of bile are thus poured into the stomach, while at the same time, some branches of the lacteals become retrograde, and disgorge their contents into the upper part of the alimentary canal, and other branches of them disgorge their contents into the lower parts of it, beneath the valve of the colon. A vomiting and purging commence together, called *cholera*, as it is supposed to have its origin from an increased secretion of bile. But I suppose, (says he,) that it more frequently arises from putrid food or poisonous drugs.

It would appear, however, that neither the quantity or quality of the bile, is wholly the cause of the complaint, for in many instances, there appears to be a deficiency of the bilious secretion; the cause must be accounted for in some other way, and it appears to me, very evident, that the immediate exciting cause of the cholera morbus, is, the action and stimulus of an *acid* secreted in the liver, or formed in the stomach and alimentary canal, and which produces an irritation of the mucus membrane of these parts, the same as many kinds of poison, and which cause the phenomena of the complaint; and this probably is the nitric or septic acid. Dr. Vought, and, (I believe) Dr. Mitchill entertained similar views. I have read an author which speaks of the same effects following the use of certain kinds of fish, said to feed on copper banks, and which causes vomiting, purging, cramps, &c. all which show conclusively that the cholera morbus is occasioned by some kind of poison. It is well known that corrosive sublimate, and other agents have very similar effects on the system, as are exhibited in this complaint. This poison is no doubt received into the circulation through the medium of the atmosphere, and not being eliminated by the ordinary excretory organs, especially the skin, is thrown back from the surface to the liver, which becomes deranged and engorged with an accumulated quantity of blood, combined with a morbid fluid, or acid, which proves the exciting cause of the complaint.

There are very many predisposing causes, such as indigestible and irritating kinds of food and drink. Crude or unripe fruit, and all articles that contain much acid or such liquids as soon run into a state of fermentation; but causes of this kind rarely produce the disease, unless the system is predisposed to it by a debilitated state of the digestive organs, or by a general relaxation and exhaustion from the influence of great heat.

SYMPTOMS.

The cholera morbus generally comes on very suddenly. It usually commences with nausea and pain in the stomach, followed by severe griping and distress in the abdomen.

These symptoms are immediately succeeded by vomiting and purging; which continues generally in paroxysms until great prostration follows. In the intervals, between the periods of vomiting, there is great sickness and distress at the stomach. The stools are at first thin and watery, and generally tinged with bile. After the disease has continued for a short time, the evacuations are very bilious. As the disease advances, the vomiting, retching, purging, and pain are severe and incessant. The peculiar feature of the complaint is a spasmodic affection of the abdominal muscles, and extremities. The person is drawn up on every attack, or in every paroxysm, often causing him to scream aloud with dreadful agony. The thirst is usually very great, but almost every liquid taken into the stomach is immediately ejected. As the disease progresses, the pulse becomes small, feeble, and intermitting, there is coldness of the extremities, countenance pallid and expressive of great distress, a cold sweat breaks out, and great prostration follows.

Cholera morbus is a very common and a very dangerous disease, often proving fatal in twenty-four hours, and the malignant type of it in a few hours.

DISCRIMINATION.

Cholera morbus is to be distinguished from diarrhœa and dysentery, by the matter which is discharged by stool being pure bile, unmixed with blood or mucus, and with scarcely any admixture of *scæces*. It may be distinguished from *colica pictonum*, or painter's colic, by the evacuations: for in the latter, although there is sometimes a considerable quantity of bilious matter thrown off by vomiting, yet the bowels remain obstinately costive.

PROGNOSIS.

Our opinion must ever be unfavourable, when the evacuations upwards and downwards are accompanied by great prostration of strength, much distension of the abdomen, intermitting pulse, cold clammy sweats, a short hurried respiration, constant hiccup, spasms of the extremities, or convulsions: but a gradual diminution of the symptoms, especially the vomiting, succeeded by sleep, or a gentle moisture on the skin, may be regarded in a favourable light.

DISSECTION.

The appearances generally to be observed on dissection, where cholera terminates fatally, are an accumulation of bile in the stomach and intestines, particularly in the duodenum; relaxation and distension of the biliary ducts and *choledochus*; and a removal of many of the viscera from proper places, occasioned probably by the violence of straining in vomiting.

COMMON TREATMENT.

Bleeding, calomel, blisters, &c.

REFORMED PRACTICE.

"We will suppose," says Vought, "the cause of this vomiting, with all the other alarming symptoms, to be an acid existing in the stomach and intestines, which, by its stimulating effect, produces all this mischief, and which, notwithstanding it is thrown out of the alimentary canal by vomits and purges, may still continue to collect there in various ways. The first thing to be done, is to use all means possible to allay the vomiting and irritation of the stomach; for which purpose, many have been in the habit of giving large and repeated doses of calomel, and also emetics; which practice is at this day approved of by many of the medical profession. I will only add what I have experienced in the result of this practice; that is, that calomel or any other laxative was immediately thrown out of the stomach by vomiting, and that it increased the distress, instead of lessening it. And when emetics were added, they usually operated with violence, produced a sudden and unavoidable prostration of strength, and notwithstanding all efforts to the contrary, the patients sunk under all the horrors of their disease."

The principal indication of cure in this complaint, is, to neutralize or destroy the acid, vitiated, or acrid bile; in other words, the exciting cause of the complaint. Some have recommended and prescribed emetics, and some purgatives; but I have no evidence of the utility of either, and I consider them very injurious. They both seem calculated to aggravate the disease, by continuing or increasing the vomiting and purging; although it is possible that a new action might be excited by the use of one or both, and in this way prove beneficial.

The following treatment I think I may say with propriety, I have found an infallible remedy for the cholera morbus, even in the last stages of it.

When first called to a patient labouring under the complaint, my first object is to allay the irritability of the stomach, not by giving any medicine calculated to ~~retain~~ the morbid secretions, or to lock them up in the system, but to *neutralize*, or render inert and harmless, the deleterious agent or agents, which is the immediate cause of it; and the following formula fulfils this indication admirably.

Take best Turkey Rhubarb, either bruised or pulverized, half a dram.

Bi-carbonate of Potash, half a dram.

Peppermint Plant, half a dram.

Grind together in a mortar, and put the powder into a teacup: add sufficient loaf sugar to sweeten, then add half a pint of boiling water, and when nearly cold, two table-spoonfuls of best brandy. Of this give two table-spoonfuls every half hour, or as often as the paroxysms or periods of vomiting and purging take place. In very severe cases I have occasionally added to every dose, fifteen or twenty drops of *laudanum*. This must be repeated until the urgent symptoms are diminished. The effect of this medicine is truly surprising. So sudden and powerful is it, that I have often been delighted at its salutary effects.

It is seldom the patient will vomit up more than one dose of the medicine; but it rests upon the stomach, calms the irritation, checks the nausea and vomiting, passes gently through the alimentary canal, changing their contents or fæces from the most morbid and fetid, to the most healthy state. While mercury, which is now given in such cases, only aggravates, this preparation acts like a charm, and I was about to say, might be compared to the act of extinguishing fire by pouring water upon it.

Besides the administration of this mixture, in case the disease is so severe as to render it imprudent to wait the short time that is necessary for the operation of it, an *opium pill* may be given. I have seldom, however, found this necessary.

External applications must also be used, and the following:

Take Red or Cayenne Pepper, one table-spoonful.

Spirits, one pint.

Simmer a few minutes, then dip flannels in, and let it be applied warm to the stomach and abdomen, and also to the extremities, particularly if there are cramps.

As a change, I have also applied *fomentations* of *bitter herbs* over the parts with decided benefit.

Hops simmered in vinegar, are excellent.

These applications remove the tension and spasms so peculiar to this complaint. Sometimes a greater portion of the disease seems concentrated in the intestines, or the umbilical region, occasioning very great distress, and it becomes necessary to administer injections. Should this be the case, or should there be such an assemblage of symptoms as require the application of several remedial agents to subdue them, the following injection must be given.

Take Mucilage of Slippery Elm Bark, one pint.

Sweet Milk, half a pint.

Molasses, half a pint.

Olive Oil, one gill.

Bi-Carbonate of Potash, a tea-spoonful.

Laudanum, half an ounce. Mix.

Introduce as much as possible of it. It has a very soothing effect upon the bowels, and generally in ten or fifteen minutes relieves the pain.

Hot bricks may be applied to the feet, and they should be bathed in warm ley water.

The patient should take freely of *mint tea*, *slippery elm*, and other mucilaginous drinks. Bread toasted very brown or black, and boiling water poured upon it, makes a very grateful and medicinal drink.

Indian, or *oat meal gruel*, also, has a very excellent effect upon the bowels in this disease. It acts as a soothing or emolient poultice to the stomach and intestines, while at the same time it affords nourishment.

I repeat that the above practice, is uniformly successful in cholera morbus, and where it has been promptly tried, it has never, to my knowledge, failed in a single instance.

I have been called upon when life was nearly extinct, where the patient has been drawn nearly double with the pain or spasms, and when the ordinary course of treatment, such as mercury, salts, senna and manna, &c. had only rendered the complaint worse, and by pursuing the treatment laid down, they have been immediately relieved, and in a few hours, cured.

I have just prescribed, for a case of the cholera morbus, where the person had been vomiting and purging three days, and had been attended by a physician without benefit. He had become almost senseless, excessive prostration, and the evacuations passed off involuntarily. I administered the mixture first mentioned, combined with a small quantity of *cinnamon* and *cloves*. In a few hours, the disease was arrested, and he soon recovered.

It is impossible for my pen to describe the great contrast between the common and the reformed practice, in this as well as other diseases, and to be known, needs but to be tried.

The treatment is founded upon a belief that the cause of the disease is an *acid*, and that the remedy is an *alkali*, and hence the *bi-carbonate of potash* is given, and considered the *antidote*.

In concluding this chapter on cholera morbus, I shall relate a case

detailed by the late Dr. Vought, whose views and treatment for cholera morbus were in unison with our own.

The following was a case which came under my observation, of cholera morbus, treated by giving *calomel* and *emetics*, in the fall of 1821. He was a man about fifty years of age, who had always been in the habit of leading an active life, and of late years was supposed to have used more spirituous liquors than were beneficial to his health. He was a man of a small size, light complexion, light hair, and large blue eyes. He was first taken, about the middle of the day, with a pain in the head and bowels. For present relief, he drank a small glass of brandy and water. About three o'clock, a vomiting commenced, which consisted of the food which he had taken that day for his breakfast and dinner. At five o'clock, a vomiting and purging of matter tinged with bile, attended with great distress, were the prevailing symptoms, which continued (at least every hour) through the night. At sunrise he first sent for a physician, who immediately gave him a large dose of calomel, which was rejected as soon as he took it. Another dose was then given, some of which he retained in his stomach. I called, for the first time, to see him, about nine o'clock that morning, and found his physician at his bedside, in the act of giving him some more mercury. I felt his pulse, which I found to be quick and small, consisting of about one hundred and ten beats in a minute. He was almost constantly vomiting, or retching to vomit. The fluids discharged by vomiting were enormous in quantity; sometimes sour, and green, like infusion of green tea, at other times thin and watery, consisting only of the drinks he had taken. His eyes were sunk in their sockets, and appeared fixed and glassy. His mouth was dry and parched, his tongue white and faltering, and his voice low and hoarse. He seemed listless and stupid, and was under the impression that he must still evacuate a load of noxious matter, which, he said, caused in his abdomen a disagreeable and uneasy sense of fulness, although he had already been puking and purging for the space of twenty hours. His skin was pale and clammy, his extremities were cold, and large drops of cold sweat appeared on many parts of his body; he was also attended with frequent spasms and tremors.

I asked his physician what had been given. His reply was, that he had taken large doses of calomel. I mentioned the propriety of giving him the sub. carbonate of potash, and the acid of lemon, in a state of effervescence, for the purpose of checking the vomiting, and opiates, for the purpose of allaying the irritation of the stomach. My opinion was in a manner treated with contempt, and the reply was, that he would soon settle the patient's stomach, by giving him an emetic. I expressed my disapprobation of the course of treatment resolved to be used, and observed that persons in his situation would evacuate bilious matter till they died, or till they no longer had strength to raise it, if means were not used for their relief; and when they could no longer vomit, it would be out of the power of medicine to save them. I called again to see the patient in the evening of the same day, by a particular request of some of his friends,) and found his symptoms increased, his pulse one hundred and thirty, his strength much exhausted, his skin shrunken, pale and discoloured, in spots of a blueish or livid hue. His vomit-

ing of bilious matter was not so immense, but his retching to vomit was continued, with scarce an interval of more than one minute, while I remained at his bed-side. I inquired if he had taken an emetic, and was informed that he had not yet taken it, but was going to take it that evening. I then made another reply, and said it would in my opinion go hard with him, if he took an emetic, as I supposed it impossible for him to undergo its operation. The alkaline medicine was not given in any shape whatever. The doctor, as I understood, returned in the evening and administered an emetic, which operated three or four times, by vomiting a little bilious matter, and powerfully *per ano*, or otherwise, produced an involuntary discharge by stool; and after which, in defiance of all the brandy, wine, bark, and opium that was given him, he expired the same night, at three o'clock, in the most horrid and excruciating distress, it being only about thirty-six hours from the time of his first confinement.

CHOLERA OF INFANTS; OR, SUMMER, OR BOWEL COMPLAINTS, (*Cholera Infantum.*)

DESCRIPTION.

THIS disease is the *cholera of infants*, which in some respects resembles that of *adults*; but differs from it in many respects. It is known usually by the name of the *summer or bowel complaint*, and it is very prevalent among children during the summer season, many very mortal.

CAUSES.

Dr. Rush says, that from its occurring nearly in the same season with cholera in adults, and remitting fevers, he considers it produced by the same cause, and a modification of the same disease; and consequently, many of the same remedies are necessary in performing a cure.

There appears to be three principal causes which produce this complaint:

1. A great degree of heat.
2. The impure air of crowded cities.
3. Dentition, or teething.

One writer says that it is a mere variety of the bilious fever of our climate; the force of which is turned inward, upon the intestines.

This disease is very seldom met with in the country where the air is salubrious; but in cities it produces annually a most frightful mortality. It may be caused by a check of perspiration, causing the blood to retreat from the surface, to the internal parts, and deranging the liver, and mucous membrane of the intestines.

SYMPTOMS.

This complaint is usually characterized by fever; and commences in a gradual manner with more or less diarrhœa, and after a short time, it

is attended with nausea, retching and vomiting. The evacuations are very offensive, apparently not very bilious, and consisting of a slimy, whitish, frothy, or nearly of a colourless, watery fluid. If the disease progresses a short time, the child begins rapidly to waste. There is, a coldness in the extremities, the skin is shrivelled and dry, and there is a preternatural degree of heat in the head and bowels. The face is very pale, the eyes dull and sunk, the pulse is weak, irregular, and frequent. There is lethargy or drowsiness, and the child sleeps with his eyes partly open. There is considerable tossing or motion of the head when awake, and if no remedy is administered, the child rapidly sinks into a state of great prostration, and insensibility, and which proves fatal.

This complaint is very liable to assume a chronic form, and become very much protracted; when this is the case, an almost incredible degree of emaciation follows. The child becomes almost a living skeleton. Canker appears on the tongue and cheeks, the face and other parts bloat, and the discharges become extremely acrid, excoriating and fetid.

The continuance of this disease is very various, depending upon many causes, such as air, diet, nursing, medical treatment, &c. It may prove fatal in a few hours, or it may last many months.

Where the disease has continued for a length of time, there is ulceration of the living membrane of the stomach and bowels, showing conclusively that the disease is caused by the action of an acid or poisonous fluid, acting upon these parts.

Dr. Vought has the following description of this complaint:

Cholera Infantum is a vomiting and purging of children, and produced by the same cause as vomiting and purging of adults. The frequency and danger of this disease, (says Rush) is always found in proportion to the heat of the weather. It affects children from the first or second week after their birth, till they are two years old. It sometimes begins with a diarrhoea, and worms are frequently discharged. There is also fever, which is of the remitting kind. Children draw up their feet, and are never easy in one posture. The disease affects the head, and in some instances, delirium and mania are produced. Frequently a swelling occurs in the abdomen, in the face and in the limbs. A thirst attends every stage of this disease. The eyes are languid and hollow, and children sleep with them half closed. Sometimes the vomiting continues without purging; but generally the purging continues without vomiting, through the whole course of the disease. The stools are mostly large and fetid. A cool day frequently abates its violent symptoms, but in extreme warm weather, it frequently ends in death, in the space of a few days; and sometimes it carries off children within forty eight hours from the first attack. When it is of long continuance, and the approach of death is gradual, an emaciation of the body takes place, livid spots appear, the bones come through the skin, and convulsions, a hippocratic countenance, hiccup, &c. with many other distressing symptoms, precede the fatal termination of this disease.

COMMON TREATMENT.

The treatment for this complaint pursued by physicians generally,

is very similar to the common cholera morbus. Mercury is the principal medicine made use of.

REFORMED PRACTICE.

If called to prescribe for this complaint when there is vomiting, the first object is to allay it, and this may be done by the exhibition of the *neutralizing mixture* or *cordial*, the first preparation mentioned under the head of common cholera morbus.

It must be given according to the age of the child, and the urgency of the symptoms.

One or two tea-spoonfuls may be given to a child a year old, and repeated every half hour. This preparation is not only necessary in the stage of nausea and vomiting, but in any and every stage of the complaint. It acts mildly, but effectually upon the stomach and whole alimentary canal, neutralizing acidity, while it evacuates the fetid and morbid accumulation, and brings on a healthy action, and thus improves the condition of the patient speedily, and in an eminent manner.

After repeated trials of every other kind of purgatives, I find this altogether superior to every other. It has a three fold effect; it corrects acidity, cleanses the stomach and bowels, while it restores the tone of them by its astringent qualities. It should be continued until the passages become healthy, which is usually the case, as soon as it acts moderately upon the bowels, or as a laxative.

In protracted cases of the disease, it may be given four or five times through the course of the day.

In this complaint, injections or clysters are exceedingly valuable. They have a soothing and emolient effect upon the intestines; allaying pain and inflammation in a very remarkable manner. One may be administered whenever the child is very fretful and distressed.

The following:

Take an infusion or Mucilage of Slippery-Elm, half a pint.

Milk, half a pint.

Molasses, one gill.

Sweet or Olive Oil, a wine glass.

Common Salt, half a tea-spoonful.

Mix and introduce with a suitable sized syringe.

There is usually, as before observed, considerable heat, and swelling of the abdomen. For this symptom let the following fomentation be applied:

Take Hops.

Wormwood.

Tansy.

Catnip, a handful of each.

Simmer or boil a short time, in equal parts of vinegar and water. Inclose in flannel and apply warm to the bowels, to be occasionally repeated.

Particular attention must be paid to the state of the skin. If the disease is caused by morbid humours retained in the system and thrown upon the intestines, how necessary is it that they should be thrown off through the proper excretory ducts.

Therefore such means and medicines must be used as will divert the vitiated fluids from the centre to the surface. The feet and body must be often effectually bathed and rubbed with *weak ley water* applied tepid. It will prove very cooling and refreshing, and lessen the violence of the disease. In order to promote gentle perspiration, as well as to allay irritation or pain, medicine should be given that has this twofold effect, which is the *Diaphoretic Powders*. They are particularly serviceable when the child is wakeful, restless and in pain. For a child a year old, give two grains in a little tea, and if the desired effect is not produced in three hours, to be repeated.

Mucilaginous and cooling drinks are very useful in this complaint.

The *bene plant* makes an excellent mucilaginous drink. A few leaves dipped in a tumbler of cold water immediately forms a clear tasteless, cooling, and soothing mucilage, which has cured hundreds of cases without any other preparation. The *bene plant* is annual, and very easily raised by sowing a few seeds in the garden or in the spring, and it should be kept in every family.

When the disease assumes a chronic form, and proves very obstinate, additional means may be necessary to remove it. In such a stage of the complaint, after proper evacuations, give the following infusion.

Take Sumach Berries.

Leaves of Red Raspberry, equal parts,

Add sufficient boiling water to make a weak infusion. Sweeten with loaf sugar, and give a small quantity occasionally through the day.

At the time that this infusion is taken, give the child the following syrup.

Take the bark of the root of the Blackberry, (*Rubus Villosus*.) 1-4 of a pound.

Let it be properly cleaned, and cut in small pieces. Add a sufficient quantity of water, and boil till the strength is extracted and until there is one pint of the decoction. Then strain and add one pound of loaf sugar, boil again a few minutes to form a syrup. When cold, add one gill of brandy. Of this syrup give a small table-spoonful two or three times a day.

This treatment has, in my hands, invariably cured the worst stages of this disease. My practice has been very extensive in it, and I can scarcely recollect a single case of failure.

REGIMEN.

Arrow-root tea or jelly may be given, and mucilaginous drinks and liquid. Chicken soup, panado, gruel, &c. But the best diet for children afflicted with bowel complaints is thickened milk, to which a little cinnamon has been added.

The child must be kept clean, clothes often changed, and if possible removed to a pure atmosphere.

SICK STOMACH. (*Cholera Americana.*)

DESCRIPTION.

THIS is rather a novel disease, and seems peculiar to Ohio, or some of the western states. It seems to be a complaint in which morbid bile preponderates, characterized by heat, burning and sickness at the stomach, with retching and vomiting.

CAUSES.

It is difficult to say precisely what the cause of this disease is; some of the inhabitants of those places where it prevails suppose, that it arises from an unknown vegetable poison; but it is more probable that it arises from a peculiar state of the atmosphere, creating a morbid state of the liver, causing it to secrete a morbid, acrid or acid bile, or a peculiar acid, which acts as a poison or foreign substance.

SYMPTOMS.

The symptoms of this novel complaint, are, disagreeable, sickening sensations at the stomach, and general debility and lassitude, succeeded by great loathing, nausea and vomiting, or distressed retching to vomit.

The vomiting returns every hour; the patient complains of great distress and a burning sensation at the stomach. Hiccup and hot belchings are often troublesome. The tongue is slightly furred, and the breath is very offensive, and has a peculiar and very disagreeable smell. In more malignant cases, the patient falls into a stupor, the eyes are protruded, and pupils dilated, with other symptoms of inflammation of the brain; with an occasional vomiting of black matter which generally destroys the patient in a few days. The materials generally thrown out of the stomach, consist of liquids that have been swallowed, which are hot, acrid, or sour when ejected.

TREATMENT.

To allay the irritability of the stomach, give the following:

Bi-carbonate of Potash, one dram.

Mint Water, 8 ounces. Mix.

A table-spoonful every hour may be taken.

When the stomach is calmed or quieted, the neutralizing mixture or cordial may be given until it acts as a gentle purgative. After which, let it be administered two or three times through the course of the day. Should this fail a correct the morbid state of the stomach, let the common purgative be administered, and occasionally repeated. In the intermediate time, the *wine bitters* may be taken. Should the disease not yield to this treatment, it will be necessary to exhibit *emetics* occasionally, until a healthy state of the stomach is produced. The *common emetic powders* may be given, and where circumstances justify, or there is nothing to contra-indicate it, the treatment may be first commenced by a gentle *emetic*.

CHAPTER II.

WATER BRASH. (*Pyrosis.*)

DESCRIPTION.

This disease is known by a burning pain in the stomach, attended with copious eructations generally of a watery and insipid fluid.

CAUSES.

Whatever deranges the functions of the stomach, or the surrounding viscera, may give rise to the water brash, as indigestion, acidity, &c.

SYMPTOMS.

The application of cold to the lower extremities, and distressing emotions of the mind, are enumerated among its occasional causes.

The fits of pyrosis usually come on in the morning and forenoon, when the stomach is empty; and the first symptom which the patient perceives is a pain at the pit of the stomach, with a sense of constriction, as if it was drawn towards the back, and this is usually much increased by an erect posture. The pain, after proving severe, and continuing for some time, is followed by eructations and the discharge of a considerable quantity of a thin watery fluid, sometimes of an acid taste, but often quite insipid. In some instances however, it is very ropy, and of an appearance somewhat similar to the white of an egg.

On a frequent repetition of the eructations and discharge, the fit at length goes off.

This disease rarely proves fatal, but is often tedious and troublesome to remove, being apt to recur occasionally a long time after it has once taken place.

TREATMENT.

The patient will commence with the following liquid :

Take Elixir Salutis, or Compound Tincture of Senna, 8 oz.
Tincture of the Balsam of Tolu, half an ounce. Mix.

Of this, the patient will take a table spoonful every morning fasting. It creates a healthy action of the stomach, and thus soon mitigates the symptoms of the complaint. It is carminative, stimulating, laxative and tonic, in its effects, and therefore well calculated for the removal of the disease.

I recollect one case, where the person had applied to various physicians for a most obstinate case of water brash, and could find no remedy till he took the above preparation, which operated like a charm, soon effecting a cure.

REGIMEN.

Great attention must be paid to regimen; nothing greasy, or acid, must be taken, but such articles as are easy of digestion. Red pepper, mustard, and salt, may be taken with food.

CHAPTER III.

INDIGESTION. (*Dyspepsia*.)

DESCRIPTION.

DYSPEPSIA is a derangement of the digestive functions, occasioning an interruption in the organs or vicera concerned in the process of digestion; the immediate cause of which, appears to be a diminished or increased quantity, or vitiated quality of the gastric juice, or the secretion of bile.

Says Gregory, indigestion is certainly the most frequent of all diseases. It is met with in every country, in every class of society, in every season of the year. Devoid of the danger which attends other diseases, it is nevertheless equally distressing to the patient, poisoning all the sources of his enjoyment, and leading, in many instances, to the miseries of confirmed hypochondriasis. Long as it has been made the subject of inquiry by medical authors, it remains involved in much obscurity. The pathology of the disease is little understood; the method of its treatment is still imperfectly known; and the most remarkable diversities of opinion are entertained regarding the extent to which it influences the production of other disorders."

CAUSES.

1. *Proximate Cause*.—The proximate cause may depend in the first place, upon a morbid state of the *glands* subservient to digestion. The saliva may be deficient,—the gastric juice may be either deficient, or secreted in too large quantity, or vitiated in quality, whereby the coats of the stomach become enveloped with a thick tenacious mucus. Lastly, the bile may get into the stomach, and there interfere with the *first* steps in the digestive process.

2. Dyspepsia may arise from a morbid condition of the *nerves* of the stomach,—or from general torpor, or defect of the *whole* nervous system.

3. Dyspepsia may in some cases be owing to such morbid states of the *muscular* coat of the stomach as cause the food to be detained too long there, or which hurry it too soon into the bowels.

4. Dyspeptic symptoms, lastly, may originate, independent of all disease, in the stomach, from the functions of the duodenum being imperfectly performed. Morbid accumulation in the duodenum is justly

reckoned the immediate cause of that pain high up in the back which sometimes accompanies it, but it is often observed independent of the more common dyspeptic symptoms.

2. *Remote or Intermediate Cause.—Primary affections.*

1. Dyspepsia from occasional overloading of the stomach.
2. ——— from habitual overfeeding.
3. ——— from habitual indulgence in spirituous liquors
4. ——— from want of air and exercise.
5. ——— from excessive or long-continued evacuations.
6. ——— from cold.
7. ——— from anxiety of mind.

1. The first and most simple cause of dyspepsia is the occasional *overloading* of the stomach; or the taken in of some indigestible substance, which, even in small quantity, offends the nerves of the stomach, such as tainted meat; or, lastly, an accidental debauch of wine. This form of dyspepsia is commonly attended with a sense of oppression at the stomach, *nausea*, and that peculiar species of head-ache called the *megrim*. It is carefully to be distinguished from every other, because it demands a particular mode of treatment.

2. The second cause of dyspepsia is habitual full living, particularly the too *frequent* indulgence in animal food. This is one of the most common sources of dyspepsia in the upper classes of society, and is easily distinguished from all others by its occurring along with *gout*.

3. The third is the abuse of spirituous liquors. This is the prolific source of dyspepsia in the lower ranks of life, in comparison with which all the other causes of the disease are of little importance. Dyspepsia from this cause is often a very *severe*, and always an obstinate complaint. It is attended in most cases with a very acute pain in the region of the stomach (*gastrodynia*,) and tenderness of the epigastrium. It may be distinguished also by the trembling hand which never fails to accompany it. This and the preceding form of dyspepsia may so far be considered as connected, as the remedy for the disease is in both cases obvious; and as any plan of treatment, which does not make the removal of the exciting cause an indispensable condition, will be either ineffectual, or serve only in the end to aggravate the evil.

4. The fourth cause of indigestion is the want of air and exercise. Torpor and inactivity of the body naturally extend their influence to internal organs, and the stomach is the first to suffer. Hence it is that dyspepsia is the frequent concomitant of a sedentary profession, and that it prevails not only among the luxurious and dissolute, but amongst the most industrious and sober classes of the community. Distention of the stomach by wind, particularly after meals, eructations, and a torpid state of the bowels, usually prevail, and constitute the *urgent* symptoms in this form of the complaint.

5. Another cause of primary dyspepsia may be found in excessive evacuations, such as flooding, and large bleedings at the arm; or in more moderate evacuations, if long continued, as for instance, leucorrhœa, or protracted suckling. The practice of keeping strong children at the breast for a year and a half or two years is very common in the lower orders in this country, and leads, particularly in weak habits, to some.

of the most distressing forms of dyspepsia which are ever witnessed. The peculiar characters of this variety of dyspepsia are a sense of *sinking* at the pit of the stomach, giddiness, dimness of sight, a feeling of different objects dancing before the eyes, and a *small*, often *imperceptible*, pulse.

6. In the next place, dyspepsia may be traced in very many cases to the influence of cold and moisture. The general effect of cold, when long continued, is to depress the nervous power, and this is often manifested in the temporary loss of the functions of the stomach. Hence it happens that dyspeptic aliments are so frequently met with when the cold weather first sets in. This kind of dyspepsia may usually be distinguished by the thirst, the restlessness, the white tongue, and other marks of general though slight febrile disturbance which attend it. The symptom that most attracts the notice of the patient, and for which he specially solicits the aid of the physician, is loss of appetite, (*anorexia*.)

7. The last source of primary dyspepsia which requires notice, is mental emotion, particularly the depressing passions, fear, grief, but above all *anxiety*. This, though very common, can only so far become a practical consideration, as it may lead to the propriety of recommending, in some cases, change of air, of scene, and of habits, as essential to recovery.

The various *sympathies* of the stomach have frequently been described, and every one is sensible of the intimate connection of dyspepsia with local disease in other parts. In many of these instances the affection of the stomach has been viewed as the primary complaint, upon the principle that such states of local disease are best combated by remedies which *apparently* act on the stomach. It has been well observed, however, that when a disordered state of the digestive organs, and local disease in a remote part, are concomitant, they may be but effects of some distant and unknown irritation, perhaps proceeding from the nervous system.

1. Dyspepsia symptomatic of habitual constipation.
2. ——— of chronic disease of the liver.
3. ——— of chronic disease of the spleen.
4. ——— of functional disturbance of the uterus.
5. ——— of obscure disease of the kidney.
6. ——— of chronic affection of the bronchia.
7. ——— of chronic cutaneous diseases.

1. Dyspepsia is in many instances accompanied by a costive state of the bowels, to which, when present, the patient himself is generally disposed to refer all his symptoms. The student, however, will remember, that the functions of the stomach and great intestines are very different, and that disturbances in them are by no means necessarily associated. Costiveness frequently exists without indigestion, and dyspepsia without constipated bowels. The contrary indeed sometimes happens; but whenever habitual costiveness is the *direct cause* of dyspeptic symptoms, the circumstance will generally be made manifest by the hardness or fullness of the abdomen, and by those inquiries into the present and *previous* state of the evacuations which the practitioner will in no instance fail to

make. 2. In many cases dyspepsia will be found dependent upon chronic diseases of the liver, and more than is frequently imagined. When a defective or vitiated state of the bile, that is to say, *functional* disturbance of the liver, exists; still more, when structural disease of that organ is present, accurate investigation will commonly lead to the detection of some of those symptoms formerly enumerated as *characteristic* of hepatic affections. 3. There can be little doubt, that dyspepsia, is in certain instances, symptomatic of an affection of the spleen. It would be contrary to all analogy to suppose that this organ is not subject to some primary forms of disease; but very little appears to be known concerning them. Dr. Bree has described an affection of this kind, which he imagines to consist in a *congestive* state of the vessels of the spleen. It is probable, that an acquaintance with the physiology of the spleen might enable us to separate and refer to their true source some other cases now classed under the general head of dyspepsia. The peculiar symptoms of *splenic* dyspepsia, as far as I have been able to trace them, are fulness and sense of weight in the region of the spleen (without corresponding flatulence,) a sallow countenance, loaded tongue, and occasional hæmorrhages. It chiefly occurs in young women, particularly in female servants who have over exerted themselves, and is very obstinate and difficult of cure. 4. Dyspepsia is a frequent concomitant of disturbance in the uterine functions. It is a leading symptom in chlorosis and hysteria, and is well known as one of the earliest evidences of pregnancy. This form of the disease is easily distinguished from all others by the *habit of body* in which it occurs. Vomiting of the food half an hour after it has been taken (marking the great degree of irritability prevailing in the stomach,) will generally be found characteristic of *uterine* dyspepsia. 5. Indigestion is a well-marked symptom in diseases affecting the kidney, the *local* evidences of which are often very obscure. Hence it is that the original complaint is sometimes overlooked; but the error is fortunately of no material importance. 6. The functions of the stomach are frequently impaired in chronic affections of the bronchia, and this complication of a disease is very formidable, particularly in old people. 7. A remarkable connection has long been observed between dyspepsia and several varieties of chronic cutaneous diseases.

Such are the most important distinctions among the several kinds of dyspeptic complaints.

SYMPTOMS.

The symptoms of dyspepsia are extremely diversified. They may be divided into such as are referable to the stomach itself, or to its sympathies with other parts of the body, especially the intestines, kidneys, heart and lungs, brain, and nervous system. Among the first may be enumerated, nausea, pain in the epigastrium or hypochondria, called *gastrodynia*, heart-burn or cardialgia, a sense of fulness, distension, or weight in the stomach, a feeling as if a ball were lodged in the œsophagus or throat; acid or fetid eructations, pyrosis, or the vomiting of a clear liquor, sometimes of an acid quality and often in vast quantity, a sensation of *sinking* or fluttering at the pit of the stomach, and lastly loss of appetite. To the second head of dyspeptic symptoms may be

referred, among many others, costiveness, or an irregular state of the bowels, with a morbid appearance of the evacuations, pain over the region of the stomach, of the back, together with turbid urine, a disagreeable taste in the mouth, especially on first waking, tooth-ache, palpitation, pulsation in the epigastrium, irregularity of the pulse, a short dry cough, and occasional difficulty of breathing, giddiness, and headache, sometimes referred to the fore, but more commonly to the back part of the head; languor, lassitude, and great depression of spirits, with fear of death, or of impending evil, in one word, hypochondriasis. These last evidences of affection of the nervous system indicate a very aggravated state of the disease.

The tongue is generally referred to as affording evidence of the state of the stomach; but it will often be found that the tongue is perfectly clean when the stomach is much disordered.

“The symptoms of indigestion,” says Dr. Eberle, “differ considerably, according to the stage of the complaint, or the degree and extent of the irritation. In the commencement the appetite is variable, generally weak, and often entirely destroyed; the patient is troubled with flatulency, distention, acid eructations, and colic pains; the mind is, at times, depressed and languid; the tongue covered with a white fur; the bowels usually constipated; the whole system languid, particularly during the process of digestion; and there is almost a constant uneasy feeling in the epigastrium. Sometimes the appetite is morbidly craving, but if the patient indulges freely in taking food, he becomes much oppressed, and generally suffers severe pains some hours after eating. After the disease has continued for some time, or it is aggravated by some unusual irritating cause applied to the stomach, the pulse becomes tense and quick; the epigastrium tender to the touch; the mind irritable, discontented, and gloomy. The colic pains are more frequent and severe some time after taking food; the bowels irregular, being sometimes constipated; at others affected with diarrhoea, during which portions of food are occasionally passed off in an imperfectly digested state; the stools varying in colour, consistence, and character. The body now begins to waste, the strength fails, the epigastric distress severe and constant, the countenance assumes a haggard and sallow aspect, the patient complains of more or less difficulty of lying on the left side, the skin becomes dry and shrivelled, and there is usually a morbid sensibility to low temperature.

From the extensive sympathies which subsist between the stomach and every other part of the living body, dyspeptics are frequently much harassed by painful and other distressing affections in parts situated remotely from the stomach. Among these sympathetic affections of indigestion, *head-ache* is the most common and annoying.”

PROGNOSIS:

Dyspepsia never proves fatal, unless when, by a very long continuance, it produces great general debility and weakness; and so passes into some other disease, such as dropsy; but it is at all times very difficult to remove, but more particularly so in warm climates.

DISSECTION

The morbid appearances to be observed on dissections of this disease, are principally confined to that part of the stomach which is called the pylorus; which is often found either in a contracted, scirrhus, or ulcerated state. In every instance, the stomach is perceived to be considerably distended with air.

COMMON TREATMENT.

Mercury, &c.

REFORMED PRACTICE.

The object to be kept in view in the treatment of dyspepsia, are:

1. To obviate the several exciting causes of it.
2. To expel from the stomach the several offending agents.
3. To obviate costiveness.
4. To improve the tone, or energy of the stomach, and

Lastly, to remove urgent or distressing symptoms.

With a view of fulfilling the first indication, the patient must abstain from every exciting cause, which he is conscious has given rise to the disease, whether in eating or drinking, or in any other irregularity.

The second indication, viz. for removing from the stomach all offensive or morbid agents, an *emetic* may be given.

Take Rad. Ipecac, pulv.

Lobelia Inflata, pulv. Equal parts. Mix.

Of this a tea-spoonful may be taken in a tumbler of *boneset tea*, and if it does not produce gentle vomiting in half an hour, let it be repeated. The same tea, or infusion, may be freely taken during the operation.

The day after the emetic has been given, our common purgative may be administered. But in obstinate cases the compound powder of mandrake is much preferable. A moderate dose of either will be sufficient. It will be necessary to repeat each of these classes of medicines once a week, especially where the disease has been of long standing, and inveterate. There is in this complaint, such a tenacious viscid fluid, or state of the stomach, that every means to remove the complaint is apt to prove ineffectual, until there is a new or a healthy action excited. No medicine appears to act upon the living fibre of the stomach, until its actions have been very much stimulated or inverted.

Emetics, particularly prove beneficial in dyspepsia, first, by evacuating morbid or offending materials, and second, by imparting new tone or energy to it; third, by its action upon the skin, by eliminating morbid or vitiated humours, and fourth, by the healthy shock it gives to the neighbouring viscera, and the whole system.

Where there is great aversion to the *lobelia*, *ipecac* may be substituted; but it is not so effectual, being less stimulating. Even where dyspepsia is complicated with organic or chronic affections of the liver, which is very often the case, and where mercury is supposed to be necessary to remove them, this kind of emetic, and particularly when accompanied by mandrake, affords a substitute for this mineral.

Where the liver has been much affected, I have found their exhibition very successful. The next great indication to fulfil in the treatment of dyspepsia, is, to regulate the bowels. It appears that the liver in this disease from debility, obstruction, or torpor from some cause, ceases to perform its office, or performs it very imperfectly; in consequence of which there is not a sufficient quantity, or a proper quality of bile secreted to keep up a regular or peristaltic motion of the intestines; the effect of which, is an inactive or costive state of them; and therefore, such medicines as stimulate the liver to perform its office, are obviously indicated.

In addition to the emetics recommended, the patient must endeavour to regulate the bowels if possible, by a course of *diet*, and there is no article so effectual as the coarse or *brown bread* which is now in many places very much used. The bran, in which consists the physical properties of the wheat, is retained in making this bread, which affords a more natural stimulus to the liver and alimentary canal, than any medicine which can be given. The wheat should be ground coarse, but should not be bolted, and in all respects be made as ordinary bread.

Some prefer biscuit made of the same. I do not remember a single case, however costive the bowels may have been, where this bread has failed to regulate them, as well as to improve the state of the stomach.

The fourth indication is to improve the tone of the stomach.

The means already recommended are calculated to fulfil this object, but other medicines may be necessary; and I have found that the *anti-dyspeptic pills* are well calculated for this purpose. They first gently stimulate the stomach, while at the same time they cleanse and impart tone and energy to it, without causing that debility which so often follows the use of other preparations. They also serve to obviate costiveness, and they have cured many cases of dyspepsia without the aid of any other medicines.

Another most valuable medicine for indigestion, and which is likewise calculated to fulfil several of the above indications, is the following preparation:

Take Golden Seal, pulv. 1 dram.
 White Wood Bark, 2 drams.
 Bitter Root, or Indian Hemp, pulv. 1 dram.
 Capsicum or Cayenne Pepper, half a dram.
 Sweet or Malaga Wine, 1 quart.

Add the articles pulverized or bruised, to the wine, and let it digest a few days, and it is fit for use. The patient may take from a quarter to half a wine-glass three or four times a day, on an empty stomach.

This creates an appetite, and strengthens the system generally. The few individuals in possession of this formula, annually sell hundreds of dollars worth, at two dollars per bottle, for the cure of dyspepsia, and there are many well authenticated cases in which it has proved a sovereign remedy.

I have occasionally had a case where our ordinary course of treatment has proved unsuccessful; I have then given the following with success:

Take Epsom Salts, 8 ounces.
 Boiling Water, 8 ounces.
 When cool add Muriatic Acid, half an ounce.

Of this give a table-spoonful every morning in a tumbler of cold water. During the day the patient must drink a strong infusion of *boneset*, and every night he may take a large tea-spoonful of charcoal in a little tea or molasses, if the stomach will bear it.

With us, this treatment has been very successful. A thousand other articles have been recommended, and many have I tried, but I have found little benefit resulting from them.

A Mr. Halsted of this city; a short time ago, became very popular for treating the dyspepsia, but his practice has now fallen into disrepute. It consisted principally in suddenly thumping or striking upon the abdomen, and kneading it with the hand with a view to remove their torpid state. Several persons informed me that they received great benefit from the process; that it almost always had the effect of regulating the bowels; and being very simple, and easily put in practice, it may be tried with safety and with a prospect of some advantage.

REGIMEN.

There is no disease in which a rigid attention to diet, is of more absolute importance than in dyspepsia. Indeed the disease may be entirely cured by such a course of regimen. The patient must eat nothing but that digests easily and this he must ascertain by his own experience. *He must always get up from the table with an appetite somewhat sharp*, and whatever he finds creates flatulence, or gives any uneasiness, must be carefully laid aside. In general, fresh and high seasoned victuals, as well as greasy articles, must be avoided.

The patient may eat meats when cold, such as beef, lamb, and chickens, to be eaten in small quantities, and salt, mustard, and red pepper alternately, and freely used. Coffee and chocolate should not be drank, but a weak infusion of black tea may be used.

“In every form of dyspepsia,” says Gregory, “attention to diet is indispensable, and the patient must have regard, not to its quality only, but to its quantity. In a weakened state of the stomach it must have little given it to do. The body is strengthened, not in proportion to the quantity of food taken in, but to that which is thoroughly digested. Differences in the habits of life will of course lead to important differences in the kind and quantity of diet which should be permitted to a dyspeptic patient; but the following may be regarded as rules of very general application. It should consist in a due mixture of animal and vegetable food, but the former should be eaten only once a day. It should be thoroughly masticated. Great varieties of food at any one time should be prohibited, as leading to an indulgence of the appetite beyond the wants of the system. Articles of difficult digestion should be carefully avoided; such as all kinds of smoked, hard, dried, salted, and long-kept meat; all those dishes where too much nutritious matter is collected in a small space; eggs, for instance, potted meats, strong soups, and preparations of suet, fat, and butter; lastly, all raw vegetables whatever, with the exception of ripe fruits. Regularity in the hours of meals should be rigorously enjoined, and the patient directed to abstain from food at all other times.”

“Of the necessity of regular exercise to the due performance of the functions of the stomach, every one must be fully sensible. Walking is of all exercises the best. It is that which nature intends for us, and can never be compensated by what are called the *passive exercises* of the luxurious. Pure air is eminently conducive to healthy digestion.”

In dyspepsia a change of air, such as a voyage to sea, or a residence near the salt water, has been of great service. I know a man who was so far reduced with dyspepsia that he was carried on his bed from this city to the town of West-Chester, about fourteen miles distant, on the banks of the East-River, and after remaining there a while, entirely recovered his health.

“It has been remarked,” says Thatcher, “that cold and wet feet are frequently the cause of complaints of the stomach and bowels; these therefore should be guarded against with the greatest care. It will be of great utility about half an hour before eating, and again soon after, to have recourse to brisk friction with a flesh brush or coarse cloth, over the region of the stomach and abdomen, and the same operation should be practised every night and morning over the whole body and extremities while in bed. The operation of friction remarkably contributes to the health of sedentary persons; it invigorates and excites the natural warmth, promotes insensible perspiration and cutaneous absorption, increases the action of the stomach, and consequently its power of digestion. In short, friction is so highly conducive to the recovery of the patient, that it cannot be too strongly inculcated. But no less important to the restoration of the dyspeptic patient, is exercise on horseback and change of place and amusing scenes, remembering that riding should be performed on an empty stomach, and the most proper hour is in the morning before breakfast.

BILIOUS AFFECTIONS.

Many persons, particularly in the Southern states, and West Indies, are great sufferers from a redundancy of bile, destroying the digestive organs. Such persons ought to depend upon prevention more than cure. They should make use of such diet as will prevent the accumulation of bile, *pepper sauce*, *mustard*, *stewed fruits* of various kinds, sound or “hard cider.” They should exercise much, and avoid all kinds of greasy and fresh meat, or sweet articles. Pastry or rancid butter is very improper, and especially *coffee* and *chocolate*, both of which increase these affections. Costiveness should also be avoided. When a person is labouring under a bilious complaint, let him take a gentle emetic, or as a substitute, a portion of *mandrake*. After which, one or two of the *bilious pills* occasionally. Let him also take the *wine bitters*, and a tea made of the bark or berries of the *black alder*.

CHAPTER IV.

CONVULSIONS OR FITS. (*Spasmi.*)

DESCRIPTION.

THE term convulsion is usually applied to all kinds of spasmodic affections, such as hysteria, epilepsy, &c. In treating of the complaint, I have in view fits or convulsions which often occur in children, and sometimes in adults, and which assume no specific character, when they proceed from the eruption in small-pox being retained or suddenly receding, or from teething, pregnancy, &c.

CAUSES.

Fits in children and others usually proceed from some acrid matter in the stomach and intestines, such as various kinds of poison, or from flatulence, teething, worms, recession of some rash, or the recession of some eruptive disease, such as scarlatina, small-pox, sudden emotions of the mind, as fear, anger, &c.

SYMPTOMS.

Previous to an attack of convulsions in men or children, there is often great debility, with an unnatural appearance of the eyes and countenance. At other times, there is a sudden accession of the complaint. The patient is suddenly seized with a spasmodic affection of the face, body, and whole extremities, trembles and shakes violently, and suddenly falls down, and remains senseless a longer or a shorter period, with involuntary twitchings of the muscles or tendons, the teeth clenched, and a discharge of saliva from the mouth; pupils of the eyes contracted, &c.

TREATMENT.

Where the attack is sudden and violent, put the patient in a warm bath; but as considerable time elapses before this can be prepared, the feet must be immersed in warm water, and the region of the stomach bathed with capsicum and spirits simmered a few minutes together. If there is time, an injection or clyster may be given. It is difficult to introduce any medicine during the paroxysm, but after it is over, means must be used to prevent a recurrence of them. If the disease appears to exist from acrid or foul matter in the stomach, give an *emetic*, and afterwards a dose of *senna* and *manna*.

If it appears to proceed from worms, give such medicines as will expel them; and the same purgative will answer with the addition of a little *pink root*.

Should fits arise from a recession of rash, or from the invasion of some eruptive disease, excite perspiration to aid their re-appearance.

When they arise without any apparent cause, and occur at different intervals, they must be treated by giving *emetics* and *tonics*; and in other respects treated the same as epilepsy. When other means fail, give the *tincture of stramonium*.

CHAPTER V.

CRAMP IN THE STOMACH. (*Tetanus*.)

DESCRIPTION.

THIS is a very violent and most painful disease, generally attacking persons very suddenly, and is very dangerous. Weakly and nervous persons are the most subject to it. It may arise from acrid matter, or from a check of perspiration.

TREATMENT.

Frictions should be immediately made upon, or over the region of the stomach, and continued until a preternatural degree of heat is produced, and the pain begins to subside. I have found this by experience in my own person. I was once suddenly seized in the night, while in the country, where little aid or medicine could be procured. It occurred to me that friction would afford relief, and I therefore requested a person sleeping in the adjoining room, to rub my stomach and breast as hard as possible, which he did, and as soon as the friction occasioned heat, the pain began immediately to subside.—(See *principles of our practice*, Vol. I.)

Should this, however, prove ineffectual, half a tea-spoonful of red pepper may be given in half a tumbler of water or tea. At the same time, let *mint* or *peppermint tea* be given, or as a substitute, any common herb tea. Let the feet also be bathed in warm water, and red pepper in spirits be applied hot over the region of the breast. Should this fail to afford relief, apply a heated brick covered with muslin, and steeped in vinegar to the breast as hot as can be borne. This, also, has removed a severe cramp or pain in the breast when other means have failed. The person attacked may take also a tea-spoonful of equal parts of *laudanum*, *essence of peppermint*, and *spirits of camphor*.

An excellent remedy also for cramp in the breast is to take ten drops of the *essential oil of hemlock*, in a little tea, sweetened, and at the same time to apply *hops* simmered in vinegar on the stomach or chest.

CHAPTER VI.

HEART-BURN. (*Cardialgia.*)

DESCRIPTION.

THIS disease is an uneasy sensation about the part called the pit of the stomach; it is attended with great anxiety, difficulty of breathing, want of strength, inquietude, retching to vomit, coldness and trembling of the extremities. Those whose stomachs abound with acid, or with bilious disorders, are the most subject to this complaint.

CAUSES.

The causes are various, as wind, acid, and other acrimonious humours in the stomach; or from debility of the stomach, or a loss of its mucus. It may proceed from worms; from a spicy and pungent aliment; or from a transition of rheumatism or gouty humours to the stomach; or an ulcer in any part of it. It may be occasioned by fat aliment, especially if cold liquors are drank too soon after eating it. If it proceeds from bilious matter, it is attended with bitter and nauseous eructations or belching, as well as by a yellow or greenish discharge by vomiting; collections of blood about the region of the stomach from a plethora, or from spasms.

Dr. Hunter is of opinion that this disorder is generally caused by fumes arising from acrid humours, rather than from the humours themselves: his reason is, because if the patient puts himself into a posture to prevent the fumes arising to the part affected, immediate relief is generally found. A spasm in the orifices of the stomach, by which the vapours are impeded in their passage from this viscus, and by the heat of the part rarifying, produce a distension, anxiety, &c. particularly after meals. Stones in the gall ducts, or in the ureters, by sympathy produce this disease in the stomach.

More or less of these symptoms are the attendants of the heart-burn, which approaches generally with yawning and listlessness, and at its height the extremities are cold. It does not quit the patient till heat returns into the feet, and it often totally vanishes with a copious perspiration.

The heart-burn must be distinguished from that oppression and uneasiness in the stomach, which is only the effect of overcharging it with food, the colic, and a swooning.

TREATMENT.

Where the complaint appears to proceed from acidity or sourness of the stomach, with belching, heat, pain, &c. the *carbonate of magnesia* is a good medicine. From a tea-spoonful to a table-spoonful may be oc-

casionally taken in a tumbler of *mint tea*. Should this fail to remove the disease, a mild *emetic* may be given, succeeded by a purgative. If it proceeds from wind, give a tea-spoonful of the compound spirits of *lavender*.

The food should be such as is very easy of digestion.

CHAPTER VII.

CANKER, THRUSH, OR SORE MOUTH, (*Aphæ.*)

DESCRIPTION.

This is a disease to which children more particularly are subject.

It appears in small white ulcers upon the tongue, gums, and around the mouth and palate, resembling small particles of curdled milk. When the disease is mild, it is confined to these parts: but when it is violent and of long standing, it is apt to extend through the whole course of the alimentary canal, from the mouth down to the anus; and so to excite severe purgings, flatulencies, and other disagreeable symptoms. The disease when recent and confined to the mouth, may in general be easily removed; but when of long standing, and extending down to the stomach and intestines, with proper treatment it very often proves fatal.

The thrush sometimes occurs as a chronic disease, both in warm climates and in those northern countries where the cold is combined with a considerable degree of moisture, or where the soil is of a very marshy nature. It may, in some cases, be considered as an idiopathic or primary affection; but it is more usually symptomatic.

CAUSES.

Retention of acrid humours, turned inwards upon the mouth, stomach and intestines.

SYMPTOMS.

It shows itself at first, by an uneasy sensation, or burning heat in the stomach, which comes on by slow degrees. and increases gradually in violence. After some time, small pimples, of about the size of a pin's head, show themselves on the tip and edges of the tongue; and these, at length, spread over the whole inside of the mouth, and occasion such a tenderness and rawness, that the patient cannot take any food of a solid nature; neither can he receive any vinous or spirituous liquor into his mouth, without great pungency and pain being excited: little febrile heat attends, but there is a dry skin, pale countenance, small pulse, and cold extremities. These symptoms will probably continue for some weeks, the general health being sometimes better and sometimes worse, and then the patient will be attacked with acrid eructations, or severe purgings, which greatly exhaust his strength, and produce considerable emaciation of the whole body. After a little time, these symptoms cease,

and he again enjoys better health; but, sooner or later, the acrid matter shows itself once more in the mouth, with greater virulence than before, and makes frequent translations to the stomach and intestines, and so from these to the mouth again, until, at last, the patient is reduced to a perfect skeleton. Elderly people, and persons with a shattered constitution, are most liable to its attacks.

A writer thus remarks: "Infants are subject to an inflammatory affection of the mucous membrane of the alimentary canal, generally classed as a species of diarrhœa, but known also by the name of aphthæ, or *the thrush*, from a symptom which attends it in one of its stages. It chiefly occurs between the fourth and eighth month, and among such as are fed wholly or partially upon spoon-meat. There is reason to believe, that it is always connected with an improper diet. It is characterized by vomiting, fetid eructations, and pain, apparently referred to the epigastrium; tormina, diarrhœa, and some degree of tenderness of the belly on pressure. The stools are green, and slimy, or tinged with blood. Frequently they are ejected with great force. As soon as any food is taken into the stomach, the child has a motion, giving the appearance as if it passed immediately through the bowels. As the disease advances, the tongue becomes red; the mouth is covered with aphthæ, and the verge of the anus appears inflamed. The brain also becomes infected. The child is frequently drowsy, before the aphthæ appear. This symptom is vulgarly called sleeping for the thrush. Coma is occasionally observed to come on towards the termination of the complaint. The infant rapidly emaciates.

COMMON TREATMENT.

Mercury, or calomel, as usual.

REFORMED PRACTICE.

When the disease is seated, it may sometimes be necessary to give a gentle emetic, but in general, purgatives are sufficient. The *neutralizing mixture* or cordial, may be taken until it acts upon the bowels, to be occasionally repeated. Let the mouth be washed with the following gargle:

Take Sage.

Hysop.

Sumach Berries. Equal parts.

Make a strong decoction sweetened with honey, and to half a pint of it, add half a tea-spoonful of *pulverized borax*. Let the mouth be often washed with it. The child should take for nourishment, indian meal-gruel, milk, &c.

A tea made of the *red raspberry leaves* is also good for this complaint.

CHAPTER VIII.

VOMITING. (*Emesis.*)

It is sometimes the case that persons are taken with vomiting without any apparent cause, and when it does not proceed from other complaints, or in other words, is not a symptomatic disease.

The stomach from various causes becomes irritable, and every thing taken into it is ejected.

When this is the case, where it does not apparently proceed from some particular disease, our attention must be directed exclusively to the symptom of vomiting. A solution of *carbonate of potash* should be frequently given. A dram may be added to eight ounces of *mint water*, and a table-spoonful given as often as retching, nausea, or vomiting occurs.

Should not this check it, give equal parts of *essence of peppermint*, *laudanum*, and *spirits of camphor*, twenty drops of each in *spearmint tea*.

An infusion of *peppermint* may be occasionally drank.

The common *soda powders* are often sufficient to put a stop to ordinary vomiting.

If the complaint is very violent, apply a *mustard paste* over the region of the stomach.

The following plaster has also been found very effectual in allaying the irritability of the stomach. Take equal parts of *cloves*, *nutmegs*, *allspice* and *ginger*. Pulverize and add sufficient *Indian meal* and *vinegar* to form a *plaster*, to be applied to the pit of the stomach.

Bathing the feet has also an excellent effect.

When all other means fail, the exhibition of an *opium pill* has stopped the vomiting. I have also succeeded by withholding all kinds of liquids and drinks, and by giving injections, to which half an ounce of *laudanum* has been added. Cases, however, seldom occur, in which, these last remedies are called for.

A physician relates to me, the following case : He had administered *antimony*, which had a very unfavourable effect. It operated with great violence, and very much prostrated the patient. The retching and vomiting continued incessantly, till the patient appeared to be in a very dangerous situation, being almost speechless and pulseless.

He first administered sling, (brandy, water, and sugar) to check the vomiting; but it was immediately rejected. He then gave equal parts of *peppermint* and *laudanum*, which was retained upon the stomach, and checked the vomiting. He afterwards administered spirits, which raised the pulse, and the woman soon recovered.

The physician who communicated the above account, states that such was the operation of the medicine, (*antimony*) that he has never dared to give another dose since.

CHAPTER IX.

HICCUP. (*Singultus*.)

DESCRIPTION.

THE hiccup is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

It may proceed from excess in eating or drinking; from an injury of the stomach; poisons; wind; inflammations or scirrhus tumours of the stomach; intestines, bladder, midriff, or the rest of the viscera. In gangrenes, acute and malignant fevers, a hiccup is often the forerunner of death.

When the hiccup proceeds from the use of aliment that is flatulent or hard of digestion, wine, or any spirituous liquor will generally remove it. If poison be the cause, plenty of oil and milk must be drunk. When it proceeds from an inflammation of the stomach, &c. it is very dangerous. In this case the cooling regimen ought to be strictly observed. His stomach should be fomented with hops and wormwood simmered in vinegar.

If the hiccup does not cease, give ten or fifteen drops of laudanum, to be occasionally repeated.

It sometimes proceeds from flatulence or wind. When this is the case, give fennel seed tea and the *carminative drops*.

CHAPTER X.

SEA SICKNESS.

DESCRIPTION.

Sea sickness is a nausea or tendency to vomit; which varies, in respect of duration, in different persons upon their first going to sea. With some it continues only for a day or two; while with others it remains throughout the voyage.

CAUSES.

Sea-sickness appears to depend on the peculiar excitement of the brain; occasioned by the swinging or rocking motion of a vessel at sea.

SYMPTOMS.

The symptoms of sea sickness are so familiar, that they appear to require little or no description. It is a very distressing complaint, and in some habits peculiarly so; sometimes even proving fatal. It is attended with a dizziness of the head, great distress in the stomach, nausea with vomiting, and purging of bilious matter, resembling very much in its character, cholera morbus. It is likewise attended with great prostration.

TREATMENT.

As soon as a person begins to feel sick at sea, let him place himself in the open air on the deck, and in a recumbent position. This contributes much to allay the symptoms; but if it cannot be practised by reason of the weather, or other causes, let him lay in a birth, midships, or in the middle of the vessel with his head towards the prow or forepart of the vessel. I have practised this myself with very great benefit. The reason for recommending a birth midships, is in consequence of their being less motion of the vessel. Should the sickness continue severe, take a solution of the *Sal aratus* or *bicarbonate* of *Potash*, in proportion of a tea-spoonful to half a pint of water. A small table-spoonful may be taken whenever there is retching or vomiting.

Should this fail to allay it,

Take Essence of Peppermint, 20 drops.

Laudanum, 20 drops. Mix.

Take at a dose, and to be occasionally repeated.

When the vomiting first commences, a weak infusion of chamomile tea may be taken.

CLASS VIII.

INTESTINAL OR BOWEL DISEASES.

CHARACTER.

THIS class of disease is characterized by more or less pain in the abdomen, nausea, vomiting and prostration of strength, with more or less fever, and with either costiveness or copious evacuations.

CHAPTER I.

DYSENTERY. (*Dysenteria*.)

DESCRIPTION.

THIS is an affection or inflammation of the alimentary canal, characterized usually by nausea, pain, fever, tenesmus, with fetid or bloody evacuations. It is attended with more or less fever and is sometimes contagious.

In what manner Dysenteries are infectious.—Dysenteries are sometimes infectious; but whether infectious or not, depends upon circumstances. When a person, labouring under a malignant case of dysentery, is kept in a pestilential atmosphere, as is frequently the case, in departments which are neglected during the confinement of the sick; when the room is not frequently and sufficiently ventilated; when the sheets are not frequently changed; when the filthy and fetid stools are not immediately removed from the sick department; and when strict attention to cleanliness is not observed by the nurses, as is frequently the case in jails, sieges, camps, and in many other places; under these circumstances, dysentery may be infectious. But when every attention is paid to cleanliness, and when all putrid substances are removed from the habitation of the sick, I am disposed to believe that the disease is not capable of being communicated from one person to another.

It is to this day a subject of great dispute, and warm contests are entered into, by different parties, respecting the doctrine of contagion in those diseases caused by pestilential fluids. It is a subject that I do not wish to enter into.

Dysentery, arising sporadically, endemically, and epidemically.—When a dysentery arises from the putrefaction of the contents of the

alimentary canal, it is the cause of a sporadic affection. Where a few scattering cases of dysentery are only found to exist, and when their causes are produced in the body or neighbourhood of the patient only, they are then said to arise sporadically. When particular places and countries are visited by dysentery more than others, and its causes are generated in local situations, such as a pond of stagnant water, or large marsh, or body of vegetable or animal matter, undergoing the process of decomposition, as the case may be, the state of the atmosphere being impregnated more or less, according to the proportion of decomposition which takes place; when the dysentery arises in this way, it is said to arise endemically. When it appears at certain times, and attacks many persons, through large tracts and countries, and its cause taken into the constitution from a pestilential atmosphere, which every country may be more or less subject to, according to circumstances; where dysentery arises in this manner, it is said to arise epidemically.

CAUSES.

Whatever has a tendency to obstruct perspiration may give rise to this complaint. Morbid humours are retained in the circulation, and are mixed with the blood, and thrown upon the intestines, causing irritation, inflammation, and all the phenomena of the disease. Unwholesome diet, night air, damp beds, wet clothes, &c. It sometimes appears to be caused by contagion, becoming epidemic in jails, camps, hospitals, ships, &c. Sudden change of weather, with humid or moist air, may act as a predisposing cause of the disease.

Townsend, speaking of the remote cause of dysentery, thus observes:

The occasional causes may be,

1. *Putrid acrimony generated in the system.*

During the protracted heat of summer, the determination, as already stated in the observations on heat and cold, is to the external surface: but when cold and damp succeed to heat, and when the vital energy is much diminished, the determination is reversed, the perspiration is diminished, the urine is increased, and the secretions of bile and mucus in the intestines are not only increased in quantity, but rendered more acrid, and by stagnation become putrescent. Hence arise dysenteries with putrid fevers, and the weakest are the first to suffer.

2. *Putrid infection.*

This, although apparently received into the lungs, seems to exert its first action on the mucous glands of the intestines, as appears by loss of appetite, sickness, nausea, vomiting.

In these ideas I am confirmed by revolving in my mind, what is related by Sir John Pringle in his treatise on the diseases of the army.

The observations, to which I refer, were made in Zealand, and in Brabant, where the country is low and damp, and the springs are near to the surface of the earth; where the nocturnal fogs are thick and fetid, and where an autumnal sun exhales putrescent vapours.

In these circumstances, and in these situations, the army under his care was frequently attacked by putrid diseases in a variety of forms; more especially when hot days were followed by cold and foggy nights.

These at first appeared as tertians and double tertians, with foulness

of the tongue, bitterness in the mouth, nausea, and the desire of acids, putrid vomiting, and sense of oppression about the stomach.

Such were the symptoms in the camp on the first approach of this disease. But he soon had an occasion to observe a connection between these intermittents and the dysentery, because they who were first seized with dysentery, usually escaped the fever, if a plentiful evacuation followed; or if any of the soldiers were attacked by both diseases, it was alternately, so that when the flux began the fever ceased, and when the former stopped the other instantly returned.

Even in the camp it appeared to be contagious, but in the hospitals it took the form of a putrid malignant fever; insomuch that their bedding conveyed infection, and whenever the hospitals were crowded, a great mortality ensued.

He had an occasion to remark, when the disorder came on with the most alarming symptoms, when the men were suddenly seized with headache, pain in their back, heat and thirst, delirium, bilious vomitings and bilious stools, tenesmus and pain in the region of the colon; the fever remitted on the evacuation of the first passages of the alimentary canal: yet without artificial evacuations nature made no cures, unless when a cholera supervened.

As to the nature of the contagion, Sir John Pringle had occasion to observe, that it arose frequently from dead bodies left unburied in the field of battle; in one instance from the rotting of a whale; often from putrid carcasses of cattle, and from the effluvia of marshes in the autumn, and not unfrequently from foul ulcers, as well as from crowded jails and hospitals.

Proximate Cause.—It would appear that the immediately exciting cause of the dysentery, is a peculiar acid, the same as in the cholera morbus, which is secreted by the liver and which corrodes and irritates the mucous membrane of the intestines. This appears to be the opinion of the late Dr. Vought. He remarks as follows:

“That which I conceive to be the true and sole cause of this diseased state of the large intestines, has for many years been discussed by the most eminent physicians of the present age. It has been demonstrated by the most convincing arguments, and illustrated in such a manner, and by such examples, as to remove all possibility of doubt in the mind of every man of common sense. It is the only true cause capable of exciting the dysentery. But it has been, and is, and will be overlooked and undervalued, through the ignorance or neglect of many who pretend to be followers and practitioners of the science of medicine in the United States. To shew the falsity of the arguments, and overthrow the elaborate doctrines of those who have pretended that the putridity of the bile was the cause of bilious complaints, (so termed,) such as intermitting and remitting fevers, dysenteries, diarrhœas, cholera-morbus, &c. much might be said. The valuable discovery of the cause of those diseases, can never assume a higher rank than it is justly entitled to. We say that nitrogen, so combined with oxygen, (the principle of acidity,) as to form an acid in the alimentary canal, is the only true cause producing dysentery. Pringle declares, that an acid exists in the fæces, which he called the feculent acid. He united nitrous acid

with the fæces to allay the fœtor, but, to his surprise, it greatly increased it. I have tried the experiment myself, and found it to have the same effect. This acid was called, by Pringle and others, the mineral acid; but it has since been found to be of animal and vegetable origin, produced by putrefaction. Let it be implanted in the minds, not only of medical men, but also of all parents and nurses, and all who may please to read this treatise, that the increased fœtor of the stools of patients, labouring under this disease, is a strong proof that nitrous acid is the cause of this disease. It is found that the food made use of by the human species, contains the basis of this acid, in a large proportion; and animal diet is much more used than vegetable, among that class of community which suffer most from this disease."

A writer speaking of the proximate cause of dysentery says thus, "The disease appears to be a spasmodic constriction of the colon induced by local irritation,

By this constriction the fæces are retained, and by the action of the absorbents they become hardened, and therefore increase both the irritation and spasm.

In consequence of this the mucous glands of the intestines are excited, either by the immediate action of the hardened fæces, or by consent to supply the mucus, which is hurried on by the quickened peristaltic motion of the intestines, and appears in frequent stools.

The same irritation, communicated by sympathy to the heart, quickens the pulse, but in the extreme arteries of the part affected produces either effusion of blood or inflammation. This again increases irritability, and consequently spasm.

The stimulus applied to any part of the intestines being propagated to the rectum, produces the *tenesmus*, that is, a most urgent and incessant desire to evacuate the fæces.

That the theory of Dr. Cullen is well founded will appear from hence, that when the hardened *scybalæ* are evacuated, the disease is speedily relieved.

Should it be suffered to continue, the villous coat will separate, and be discharged, mixed with pus or putrid sanies, because the acrid matter acts like cantharides, when it brings on inflammation, and separates the cuticle, or continuing to act when the vital energy is much diminished, induces sphacelus. All this agrees with observations after death, for the intestines have been discovered, not only in all the various stages of inflammation, of suppuration and of gangrene, but with their diameters contracted, and their coats much thickened."

SYMPTOMS.

An attack of dysentery is sometimes preceded by loss of appetite, costiveness, flatulency, sickness at the stomach, and a slight vomiting, and comes on with chills, succeeded by heat in the skin, and frequency of the pulse. These symptoms are in general the forerunners of the griping and increased evacuations which afterward occur.

When the inflammation begins to occupy the lower part of the intestinal tube, the stools become more frequent, and less abundant; and, in passing through the inflamed parts, they occasion great pain, so that

every evacuation is preceded by a severe griping, as also a rumbling noise.

The evacuations vary both in colour and consistence, being sometimes composed of frothy mucus, streaked with blood, and at other times of an acrid watery humour, like the washings of meat, and with a very fetid smell. Sometimes pure blood is voided; now and then lumps of coagulated mucus, resembling bits of cheese, are to be observed in the evacuations, and in some instances a quantity of purulent matter is passed.

Sometimes what is voided consists merely of a mucous matter, without any appearance of blood, exhibiting that disease which is known by the name of *dysenteria alba*, or *morbus mucosus*.

While the stools consist of these various matters, and are voided frequently, it is seldom that we can perceive any natural fæces among them, and when we do, they appear in small hard balls, called scybala, which being passed, the patient is sure to experience some temporary relief from the griping and tenesmus.

It frequently happens, from the violent efforts which are made to discharge the irritating matters, that a portion of the gut is forced beyond the verge of the anus, which, in the progress of the disease, proves a troublesome and distressing symptom; as does likewise the tenesmus, there being a constant inclination to go to stool, without the ability of voiding any thing, except perhaps a little mucus.

More or less fever usually attends with the symptoms which have been described, throughout the whole of the disease, where it is inclined to terminate fatally; and is either of an inflammatory or putrid tendency. In other cases, the febrile state wholly disappears after a time, while the proper dysenteric symptoms probably will be of long continuance. Hence the distinction into acute and chronic dysentery.

PROGNOSIS.

When this disease is properly treated, it yields very readily and is soon cured, but under the common treatment it is very dangerous, and very often fatal.

DISSECTION.

Upon opening the bodies of those who die of dysentery, the internal coat of the intestines (but more particularly of the colon and rectum) appears to be affected with inflammation and its consequences, such as ulceration, gangrene, and contractions. The peritoneum, and other coverings of the abdomen, seem likewise, in many instances, to be affected by inflammation.

COMMON PRACTICE.

Bleeding even to the extent of sixty or seventy ounces, until fainting is produced, has been practised.—Mercury, opium, and blistering. Sugar of lead, nitrous acid, tobacco, leeches, balsam of copaiva, nitric acid, aqua fortis, salts, &c. &c.

“Fatal indeed,” says Vought, “may this disease be called, as it would occupy almost the whole of this volume to enumerate the places

visited, and number of deaths occasioned by this disease, in the last ten years, in the United States of America: and it may well be said, that the pages of military history weep less for the slain in battle, than those who have fallen victims to this calamity. It has been so malignant in some places as to baffle the skill of the medical profession in general; and has, in some instances, proved more malignant on account of the attending physicians not being fully acquainted with the cause and difficulties of the disease, and with the proper remedies to remove this cause and allay those difficulties.

Francis Bowes Sarré, M. D.* a gentleman of high standing in his profession, marks the very prominent symptoms which indicate the true cause of this disease. He says, great debility of the stomach, weak pulse; coldness of the extremities, difficult micturition, distressing tenesmus, a thin discharge, resembling the washings of meat, appearing very corrosive, excoriating the parts, and occasioning violent and almost continual tenesmus, were its symptoms. He says, the strength seemed withered, as if by a stroke of lightning, marking the highly septic (nitric) nature of the disease. But what were the doctor's remedies to counteract the septic (or nitric) cause and nature of the disease? He says he gave emetics, which he found to destroy the tone of the stomach, and laxatives, which hastened the progress of the disease; by increasing the patient's debility. He gave calomel, glauher salts, castor oil, sulphuret of antimony, &c. which, with the utmost pain he is obliged to say (although supported by the authority of the greatest and most candid writers in medicine) produced little or no advantage.—He tried the use of stimulating injections of opium, &c. but all to no desired effect. His patients generally fell victims to their disease. Although the doctor appears to notice the existence of an acid in the bowels, it does not appear that he used an alkali, in any shape, to neutralize this acid.

The above practice is noticed, as mentioned by the doctor himself, for the purpose of showing how malignant a state the disease sometimes appears to assume; and how difficult it has been to adopt a proper and successful treatment in this disease. I will now briefly point out the practice of many physicians in the United States, which has come under my observation, without any reference to individuals. I have made it my particular business to gain all the information in my power, on the subject of bowel complaints, since the year 1814, at which time a hospital of U. S. soldiers was put under my charge, on the west shore of the Cayuga Lake, most of whom were dangerously afflicted with these complaints; and at which time I became fully convinced of my former errors in the treatment of those complaints.—In travelling through many parts of the United States for some time, I have not failed to make all inquiries respecting the places, and the malignancy of those diseases, and particularly the method of treatment made use of by the attending physicians.

The symptoms from which physicians generally make up their minds

* See Observations on Dysentery, as occurred in Bordentown, N. J.—Philad. Med. Museum, p. 391,

to call a disease dysentery, are acute tormina, tenesmus, acrid discharges of blood, &c. sometimes accompanied with scybala by stool, and fever.

They first employ blood-letting, as authors have told them it was an invaluable remedy in the first stages of dysentery, to mitigate and take off the fever, even should the pulse be found low and quick, indicating a well-marked typhus.—Secondly, Emetics are used, they say, to cleanse the stomach and discharge the bile; for which purpose they use antimony, ipecacuanha, &c.—Thirdly, Purgatives are highly recommended, and freely used, by physicians. They accordingly give calomel and jalap, castor oil, Glauber's salts, &c.—Fourthly, Sudorifics, with a view to excite perspiration. A variety of medicines are recommended, as James' powder, Dover's powder, antimonial wine, &c. and calomel is also said to be used with the happiest effect, especially when it had affected the salivary glands.—Fifthly, Blisters. If the pain in the bowels continues obstinate, notwithstanding the several remedies before mentioned, recourse must be had to blisters, which are said by some to act as a charm in removing distressed and harassing symptoms; and, indeed, it appears to me, that after the patient has undergone all the operation of the before-mentioned remedies, it becomes highly necessary that something should act as a charm to relieve the system.—Sixthly, Astringents. Some use astringents in the first stage of the disease, and endeavour to check the discharge immediately, and cure the patient in one or two days. But the consequence generally proves to be an increase of more dangerous symptoms, and sometimes a change to a still more malignant disease.

After using all these depleting and irritating remedies, the physician finds his patient exhausted, with a preternatural constriction of the colon, occasioning those spasmodic efforts which are felt in severe gripings, which Cullen calls the proximate cause of the disease; weak and feeble pulse; coldness of the extremities; sunken countenance; brown or black tongue; great debility of stomach, with nausea and vomiting, and giving themselves up a prey to the most abject despondency. They then begin to think it necessary to endeavour to stop the discharge by stool with astringents, such as kino, logwood, zinc, &c. and give opium and tonics to prevent the patient from running down; and if the patient complains of acidity of the stomach, magnesia or prepared chalk is the leading prescription.

The whole routine of remedies here enumerated, which would appear to many well calculated to have the desired effect, will have been administered not only without the least benefit to the patient, but on the contrary, to his great injury; for had his system not been mangled in the early stages of his disease, his constitution might possibly have effected his recovery. But the strength of his constitution is now in a manner worn out, and the last resort of the physician, if it has not already by accident occurred, is to try the effect of mercury, which is given, combined with opium, in small doses, to produce salivation; which, in many cases, it fails to accomplish; and in other cases, when salivation is effected, and especially in cases of children under the age of six years, the unfortunate patient sinks under its operation, and death closes the scene.

REFORMED PRACTICE.

Indications of Cure.—1. Correct the acrimonious state of the fluids, (the exciting causes of the complaint,) and cleanse the alimentary canal.

2. Remove urgent symptoms by allaying the irritation and spasms.

3. Sheathe the irritated portions of the intestines by oleaginous and mucilaginous substances.

In the cure of the ordinary forms or types of dysentery, such medicine must first be given, as will have both the effect of cleansing the stomach and bowels, acting as an astringent and restoring the tone of them; but active cathartics should never be employed, as ample experience has proved their inexpediences. To fulfil these indications, there is no article so valuable as the genuine *Turkey rhubarb*. Compared to this, all other medicines, (the *bi-carbonate of potash* excepted,) sink into insignificance. It has a specific effect which no other known agent possesses, and it seems as though the Author of Nature had designed it especially for this, and similar diseases.

It is really a subject of astonishment to me, that physicians with this root before them, should neglect to use it, and substitute poisonous minerals in its place.

I seldom or never exhibit this article alone, but combine it in such a manner as divests it of its nauseous taste, while at the same time, its action and operation is rendered more effectual.

The following is the formula or preparation I first administer in every stage of dysentery :

Take best Turkey Rhubarb Root, bruised.

Sal Eritatus, or Bi-carbonate of Potash, pulverized.

Peppermint Plant, pulverized.

Cinnamon, pulverized, of each two scruples. Mix.

And rub altogether in a mortar,—add half a pint of boiling water, and sufficient loaf sugar to sweeten; and when cool, add two table-spoonfuls of best French brandy.

Of this preparation, give a table-spoonful every hour, until the passages are changed in their appearance and consistence.

The *alkali* neutralizes the acidity of the stomach, while the rhubarb by quickening the peristaltic motion of the intestines, carries it to the seat of the disease, and remove the morbid collections in them, and restores their tone. The peppermint, also, lessens the irritation, while the loaf sugar and brandy are valuable auxiliaries. It should be repeated according to the urgency of symptoms, purgation of the disease, and other circumstances; but generally after it has once acted upon the bowels, a table-spoonful given three times a day is sufficient, or it may be given at proper intervals.

This medicine in a short time entirely changes the complexion of the disease. It relieves the spasms, and tenesmus; corrects and lessens the fetid discharges, and in short, brings about a healthy action throughout the whole extent of the intestines.

Other means, however, are sometimes necessary to remove the disease.

After this preparation has acted upon the bowels, there may still be

inflammation and irritation in the colon, which requires other means to subdue them, and the most powerful, are, *injections* or *clysters*.

Give the following :

Take Mucilage of Slippery-Elm Bark, one pint.
Milk, one pint.
Olive Oil, one gill
Molasses, half pint.
Common Salt, Fine, one tea-spoonful. Mix,

And let it be introduced warm with a large French syringe, to be repeated as often as the patient complains of much pain.

If the spasms, or pain be very great, a tea-spoonful of laudanum may be added to the injection.

Usually in ten or fifteen minutes after one of these injections are given, there is a mitigation of the urgent symptoms. It sheathes the irritated portion of the intestines, and thereby lessens the inflammation of them. It relieves griping and tenesmus like a charm. I have sometimes known the disease so centred upon the lower portion of the bowels, that I have had to depend almost exclusively upon injections for a cure.

I now recollect one case where all medicine proved useless, and upon the use of the above injection, the patient immediately recovered.

It is necessary, also, in almost every stage of the complaint, to keep up gentle perspiration, or moisture of the skin. As the disease is sometimes occasioned by translations of morbid matter to the intestines, means must be used to throw them off by the excretion of the skin. For this purpose, *diluent* and *sudorific* drinks may be given, and when the bowels have been well cleansed, eight or ten grains of *Diaphoretic Powders* may be given, particularly at bed time ; while they serve to produce perspiration, they relieve pain, and procure sleep.

If there is much febrile excitement ; if the skin be dry and husky, attended with thirst, the surface must be often bathed with *tepid ley water*, and also the feet.

As soon as the cutaneous vessels have become thus stimulated, a portion of the morbid agents are translated from the mucus membrane of the intestines, and expelled through this medium.

Mosely states that "intermittents are not cured with more certainty by the Peruvian bark, than dysentery by sudorifics."

Copious perspiration however, is not called for in the complaint. A general and uniform moisture of the skin, is all that is required.

When the pain is located more especially in one particular part, or where there is very great distress accompanying the disease, *fomentations* will be found a valuable auxiliary.

The following may be applied :

Take Hops.
Tansy.
Hoarhound.
Catnip. A handful of each.

Boil in vinegar and water, inclose in a flannel bag, and apply to the abdomen or belly—to be often renewed. They divert the humours

from the intestines to the surface, and assist to remove pain, spasm, tension, &c.

Mucilaginous drinks are beneficial in dysentery; such as an infusion of *slippery-elm* bark, *bene plant*, *marsh mallows*, &c. They may be given alternately as the stomach of the patient will bear.

But the *slippery-elm* is decidedly the best article. It possesses very soothing and anti-phlogistic properties. A tea-spoonful of the superfine flour of the bark may be stirred into a tumbler of cold water, and the whole or part given as the patient is able to take it. Three or four tea-spoonfuls may be given through the course of the day.

Should the putrid symptoms appear, a wine glass of yeast may be given occasionally through the day, and about a gill of it added to every injection.

Many are in the habit of giving castor oil in dysentery, and in some cases it may prove serviceable, but I prefer the *sweet or olive oil*. It seems to sheath the intestines, and defend them from acrimonious humours better than any oily substance with which I am acquainted.

After the operation of the first kind mentioned in the treatment of this disease, a table-spoonful of fresh olive oil may be given in a little milk, or taken without the addition of any other article every morning. It usually acts as an aperient or laxative.

Some are in the habit of administering emetics in dysentery, but I have never found them necessary. Cases might occur, however, in which they would be necessary, particularly where the stomach and liver was in a very deranged or morbid condition.

In some very obstinate cases of dysentery, where the patient did not improve as fast as I had desired, I have found the following preparation to have an excellent effect :

Take Epsom Salts, 8 ounces.

Add Boiling Water, half a pint.

When cool, add Muriatic Acid, half an ounce.

Of this give a table-spoonful every two hours until it acts upon the bowels, to be given in half a tumbler of cold water. After every dose, the patient must drink freely of some warm herb tea, such as *catnip* or *pennyroyal*.

With me this treatment has been attended with unprecedented success, never having lost a case of dysentery in all my practice. The remedies are prompt, energetic, and sovereign.

In protracted and unusually obstinate cases, a syrup made of the *blackberry root* must be used. It has effected a cure when all other means have proved unavailing.

Dr. Vought, late of this city, wrote a very valuable treatise upon dysentery, in which he endeavours to show that it proceeds from an acid, and that the only rational mode of curing it, is by an alkali. He thus observes :

“And I venture to go one step farther, and say, that this alkaline principle must be conveyed, either by nature or art, to the intestinal canal, there to meet with this deleterious mater, and form a neutral and inoffensive substance, and thus relieve the system from the malignant

effect of this matter, or the disease must inevitably end in death; which I am sorry to say, has proved the fate of most of those unfortunate victims of this disease, who have been treated in an opposite course, and upon a different principle from those which are here laid down. I must confidently assert, and I hope it may never be forgotten by all who wish to be instrumental in saving the lives of their fellow-creatures, that in every true case of dysentery, notwithstanding all other prescriptions they may think necessary to allay certain symptoms that may occur, a constant and correct course of alkaline medicines, with the addition of mild cathartics, from the very first commencement of the disease, till the stools become natural, and the patient is free from fever, will greatly add to their success in accomplishing a cure. Thus far, by a careful attention to the efforts of nature, and by rendering her such assistance as she has required, we shall find our patient convalescent, and free from fever, with a gentle diaphoresis, and stools in a manner natural, without pain, but perhaps a little inclined to diarrhœa. We then with propriety begin the use of *tonics* and *astringents*, which must at first be used in small doses, and be increased as the strength of the patient increases, according to his situation."

REGIMEN.

"Nothing," says an experienced physician, "is of more importance in this disease than cleanliness. It contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. In all contagious diseases the danger is increased, and the infection spread, by the neglect of cleanliness, but in no one more than in this. Every thing about the patient should be frequently changed. The excrements should never be suffered to continue in his chamber, but removed immediately, and buried under ground. A constant stream of fresh air should be admitted into the chamber, and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acids.

The patient must not be discouraged, but his spirits kept up in hopes of a cure. Nothing tends more to render any putrid disease mortal than the fears and apprehensions of the sick. All diseases of this nature have a tendency to sink and depress the spirits, and when that is increased by fears and alarms from those whom the patient believes to be persons of skill, it cannot fail to have the worst effect.

A flannel waistcoat worn next the skin has often a very good effect in the dysentery. This promotes the perspiration, without overheating the body. Great caution, however, is necessary in leaving it off. I have often known a dysentery brought on by imprudently throwing off a flannel waistcoat before the season was sufficiently warm. For what ever purpose this piece of dress is worn, it should never be left off but in a warm season.

In this disease the greatest attention must be paid to the patient's diet; flesh, fish, and every thing that has a tendency to turn putrid or rancid on the stomach, must be abstained from. Apples boiled in milk, water-pap, and plain light pudding, with broth made of the gelatinous parts of animals, may constitute the principal part of the patient's food. Gelatinous broth or soup not only answers the purpose of food,

but likewise a medicine. I have often known dysenteries, which were not of a putrid nature, cured by it, after pompous medicines had proved ineffectual."

But of all the kinds of diet in dysentery, the following is best:—Take a table-spoonful of wheat flour; add a little cold water to moisten it; then add a pint of boiling milk; boil for fifteen or twenty minutes. Remove from the fire; sprinkle in a small quantity of fine cinnamon; sweeten with loaf sugar; let it be taken in moderate quantities through the day.

"I lately saw a young man," says a physician, "who had been seized with a dysentery. Many things had been tried there for his relief, but to no purpose. At length, tired out with disappointments from medicine, and reduced to skin and bone, he came over to Britain, rather with a view to die among his relations, than with any hope of a cure. After taking sundry medicines here with no better success than abroad, I advised him to leave off the use of drugs, and to trust entirely to a diet of milk and fruits, with gentle exercise. Strawberries was the only fruit he could procure at that season. These he ate with milk twice and sometimes thrice a day. The consequence was, that in a short time his stools were reduced from upwards of twenty in a day, to three or four; and he was soon cured."

CHRONIC DYSENTERY.

It is sometimes the case that the acute runs into a chronic form, arising from ineffectual struggles in the system to excite a healthy action; or it may take place from errors in diet, check of perspiration, &c.

The pulse in this form of dysentery is generally somewhat accelerated; the patient is very feeble; the appetite is impaired; the bowels deranged; unnatural evacuations, with tenesmus, or "pressing down." The countenance is pale, or assumes a yellowish tinge; the skin is dry and husky, and the face sometimes bloats; the patient becomes emaciated, and the discharges are very frequent and fetid, and sometimes general dropsy supervenes. Dissections show that the mucous membrane is the seat of the disease. It becomes thickened, rough, ulcerated, and covered with pustules, and sometimes it is gangrenous.

TREATMENT.

The treatment in this disease is somewhat similar to that recommended under the acute form of dysentery.

The preparation of rhubarb and potash, first mentioned, may be given daily; a table-spoonful three or four times in the course of twenty-four hours. At the same time the following may be given:

Take Bayberry Bark, 1 ounce.
Wild Cherry Tree Bark, 1 ounce.
Black Birch Bark, 1 ounce.
Bitter Almonds, 1 ounce.

Add a suitable quantity of water, and boil until all the strength is ex-

tracted, and let there be one quart of the liquid. Sweeten with loaf sugar, and add a gill of brandy. From half a wine-glass to a wine-glass may be taken three or four times a day on an empty stomach.

The patient may drink an infusion, made by pouring a suitable quantity of boiling water upon equal parts of *sumach berries* and *red raspberry leaves*.

Should the above treatment not prove effectual, the *blackberry syrup* must be taken, and occasionally an *emetic* administered.

The diet should consist principally of thickened milk, and chicken or animal broths.

A physician desires me to state that he cured an obstinate bowel disease by the following formula:

Take Extract of Logwood, 1 dram.
Chalk Mixture, 4 ounces.
Tincture of Catechu, 2 drams.
Essence of Peppermint, 2 drams. Mix.

Of this he gave a table-spoonful every hour. The pain in the bowels being very great, he added forty drops of laudanum to a table-spoonful of the mixture, with directions to administer in the course of an hour twenty drops more, if the pain should not cease. Under this treatment she soon recovered.

CHAPTER II.

DIARRHŒA, OR LOOSENESS.

DESCRIPTION.

THIS disease is characterized by frequent discharges from the bowels, with a pressing down, or disposition to evacuate their contents. It is attended with more or less griping, but generally without much fever. It is divided into different species: the *crapulous*, in which the fæces are more liquid than natural, and voided in greater quantity: *bilious*, wherein the fæces are yellow, and voided too copiously: *mucous*, in which either from things too acrid taken into the stomach, or from cold, particularly applied to the feet, a copious evacuation of mucus is occasioned: *cæliac*, wherein a milky humour like chyle is voided: *lienteric*, when our food quickly passes, without being much altered: *hepatirrhæal*, when a serocruentous fluid is ejected per anum, without pain.

CAUSES.

Whatever increases the action or peristaltic motion of the intestines, may produce this disease; such as improper food, irritating substances, or it may be occasioned by bile of an acrid or vitiated quality.

It may also be occasioned by a suppression of perspiration, worms, crude and unripe fruits, acids, &c. In some habits there is a variety of agents which will bring on this complaint; but probably the most

common of all, is retained, perspiration, and vitiated agents or humours, which, not being expelled by the skin, are thrown upon the liver and the mucous membrane, causing a vitiated or unhealthy secretion of bile and mucous.

SYMPTOMS.

In diarrhœa, each discharge is usually preceded by a murmuring noise and flatulence in the intestines, together with a sense of weight and uneasiness in the lower part of the belly; which cease on the discharge taking place, but are again renewed before the one which is to succeed ensues. The appearance of the stools is various. Sometimes they are thinner than natural, from the admixture of a larger quantity of fluid poured out by the exhalents of the intestines than common. Sometimes they are slimy, and sometimes they are green, when first discharged; sometimes they are evacuated of a yellow colour, but become green on exposure to the air; and now and then they are of a dark brown colour, and very fetid. As the disease advances the stomach becomes affected, and sickness, nausea, and vomiting occasionally prevail; the countenance turns pale, and the skin is dry and rigid. If it continues for any length of time, universal emaciation, dropsy of the lower extremities, and relaxation of every part ensue, together with a great loss of strength.

PROGNOSIS:

In forming our prognostic in this disease, we are to be determined by the particular cause from which it arises, whether symptomatic of another disorder, and whether of a critical nature; as likewise by the degree of debility present in the system, and the length of time it has continued. Where it attacks pregnant women, it is generally to be considered as attended with danger.

DISSECTION.

Dissections of diarrhœa which have terminated fatally, have shown, that where it prevailed as a primary disease, ulceration of some portion of the intestines is the morbid change most usually met with; in which cases the inner membrane is often abraded for a considerable extent, and its muscular coat laid bare. They have likewise shown that the follicular glands are the most frequent seat of such ulcerations, and that they now and then become cancerous, and assume the same appearance as scirrhus and cancer in other parts.

COMMON TREATMENT.

Mercury, opium, &c.

REFORMED PRACTICE.

In the treatment of diarrhœa it will be necessary to attend to the following indications:

First, To obviate or remove the morbid cause.

Secondly, To restore the impaired tone of the parts.

Vomits not only cleanse the stomach, but promote all the secretions; and therefore when diarrhœa has arisen from excess or repletion, or

from crude and acrid matter in the stomach, the first indication may be answered by giving a gentle emetic in the evening, and an aperient the succeeding morning.

If it has proceeded from obstructed perspiration, in consequence of exposure to cold, we must then endeavour to restore this by diaphoretic medicine.

It is very seldom necessary to resort to an *emetic* to cure any species of diarrhœa, except it has assumed a chronic form, and become extremely obstinate.

Rhubarb, combined with an *alkali*, and aromatics, usually puts a stop to the complaint in a few hours. The preparation mentioned under the head of dysentery, may be given every hour, until the passages are changed in their appearance, and afterwards given at longer intervals. In ninety-nine cases in a hundred, this preparation almost immediately cures ordinary forms of diarrhœa. When an exception, however, occurs, the patient may take the following decoction:

Take Sumach Berries.

Bayberry Bark.

Wild Cherry Tree Bark. Equal parts. A small quantity of each.

Bruise, and add sufficient boiling water to make a strong infusion. Sweeten with loaf sugar, and let half a tumbler be drank occasionally through the day. An injection may be given every day, particularly if there is any pain or griping. At bedtime, give a portion of the *Diaphoretic Powders*; but it must be borne in mind that no *anodynes* or *astringents* must be given, until the stomach and bowels have been properly cleansed, or until the acrimonious state of the fluids have been corrected.

The author of Medical Admonitions says, "One caution is however necessary against the too prompt and indiscriminate employment of purgative medicines, in the outset of the disease. Believing it never to originate but in the irritation occasioned by some matter, which they suppose cannot be too rapidly removed, those who suffer from the disease, generally, have immediate recourse to some active purgative, to expedite the salutary process which they suppose nature to have instituted. But it will frequently happen, that so far from accelerating the cure of this malady, such medicines will, by their additional irritation, prove highly pernicious."

The patient must take for his diet, milk boiled and mixed with a little wheat flour.

CHRONIC DIARRHŒA.

Simple diarrhœa sometimes becomes chronic in its character, often continuing for a length of time, very obstinate. There is a preternatural discharge from the bowels which is kept up at intervals for a great length of time, and which proves very obstinate. When this is the case and when the common diarrhœa does not yield to the usual course of treatment, but assumes this protracted type, it must be treated the same as chronic dysentery. Recourse must be had to mild emetics, and mild laxatives, and our common purgative in such cases, is very

serviceable. After the exhibition, the *neutralizing mixture*, or the preparation of rhubarb before mentioned, may be given in doses of a table spoonful three or four times a day. At the same time, the *syrup of blackberry root* must be given.

‡ The diet must consist principally of thickened milk, to which a little powdered cinnamon has been added.

It arises from a deranged or morbid state of the liver, which secretes such an acrid or poisonous fluid, as seriously affects or diseases the mucous membrane of the intestines, causing inflammation, ulcerations, or contractions. The object should be first, to abate the local inflammation; second, to change the nature of the secretions of the stomach and bowels, and to allay the irritations of the intestines; third, to diminish the frequency of the discharges with aperients combined with astringents; fourth, to restore lost strength.

In treating the complaint, regard must always be had to the skin, as well as any other secretion and excretion.

CHAPTER III.

COLIC. (*Colica*.)

DESCRIPTION.

Colic is characterized by great pain in the bowels seated principally in the umbilical region, and extending to the stomach, accompanied with nausea, retching, vomiting, and often a spasmodic contraction of the muscles of the abdomen. Several species are enumerated.

1. *Flatulent Colic*, when there is costiveness, griping in the bowels, a rumbling noise, distention of the stomach, pain severe, with an inclination to vomit, &c.

2. *Hysteric Colic*, when there is nausea and sickness at the stomach, severe spasms, costiveness, and dejection of spirits, &c.

3. *Bilious Colic*, when there is a bitter taste in the mouth, thirst, febrile heat, and a vomiting of bilious matter and costiveness.

4. *Painter's Colic*, occasioned by the absorption of lead.

This disease is called colic, from its being more directly seated in the intestines called the colon, than any other. It is called by a variety of names, on account of its symptoms, such as, *colica biliosa*, from excess of bile in the bowels; *colica calculosa*, from stony substances in the intestines; *colica febrilis*, or colic with fever; *colica flatulenta*, colic from wind; *colica misenterica*, from diseased misentery; *colica nervosa*, nervous colic; *colica pituitosa*, or spasmodic colic, &c.

CAUSES.

The disease is produced by various causes, such as crude and acerb food, wind, a redundancy of acrid bile, long-continued costiveness, hardened fæces, certain metallic poisons, derangement of the primæ

viæ, metastasis of gout or rheumatism, hysteria, the application of cold and moisture, worms in the intestinal tube and from swallowing poisonous substances as lead, the different species has been variously denominated, according to the cause which has given rise to it, but in all of them the proximate cause seems to be the same, viz. a spasmodic constriction of some part of the intestines.

In all cases there is evidently an irritating substance in the alimentary canal, which produces a spasmodic contraction of the abdominal muscles, and sometimes violent inflammation, coldness of the extremities, distension of the stomach by a collection of wind, vomiting, obstinate costiveness, and sometimes an evacuation of *fæces* by the mouth, (a very disagreeable and distressing symptom) called the *aliac passion*. The pain changes its situation, and is not confined particularly to one spot.

FLATULENT COLIC.

This disease is termed flatulent colic in consequence of indigestion and flatulence being the most predominant symptoms.

A weak or debilitated state of the digestive organs, induces this species of colic. In persons of this description, certain articles of food will produce the disease, such as unripe fruit, crude vegetables, &c.

Flatulent colic generally commences by a sense of fulness, and uneasiness at the pit of the stomach, attended usually with pain, nausea, retching and vomiting, which continues to increase until the patient becomes very distressed. After a while these symptoms subside or partially subside, and there are short intervals, the pain occurring in paroxysms, upon an accession of which, the patient is extremely uneasy, and can scarcely lay a moment in one position. He rolls upon the bed, and if his strength permit, gets upon the floor, where he still continues to change his posture, moving to and fro, with his body bent forward, and with his hands pressing upon the abdomen. The pain flies from one part of the bowels to another, and is much lessened when there is a discharge of wind either upwards or downwards. There is costiveness with considerable febrile excitement, with pain, soreness, griping of the bowels, a rumbling noise, extension of the stomach, an inclination to throw up, and coldness of the extremities.

The presence of wind enables us to distinguish this form of colic from the others.

TREATMENT.

Flatulent colic is cured with very little difficulty. The principal object is to expel the wind, and to remove the constipation of the bowels. To effect which, I usually give a purgative combined with aromatics. The following formula generally affords immediate relief.

Take Cinnamon.

Cloves.

Nutmegs.

Ginger.

Gum Aloes, Of each, equal parts. Pulverized.

Add a large table spoonful of this compound to half a pint of Holland gin. After it has stood a short time, give a table-spoonful until it acts upon the bowels, or until relief is procured.

At the same time the patient should take freely of *peppermint tea*. Brisk friction should also be made upon the stomach and bowels, which often occasions a free discharge of wind. The belly also may be bathed with *capsicum* and spirits. If the colic has proceeded from over eating or loading the stomach, half a dram of *Ipecac* may be given, and the operation of it aided by drinking a weak infusion of chamomile.

When called to prescribe for a patient who is labouring under spasms, or who is in acute distress, it is desirable to afford immediate relief, or before the above medicine has time to mitigate the symptoms. When this is the case, give an *opium pill*, containing two or three grains, to be repeated in an hour if the pain does not subside.

As soon as the patient becomes relieved, give an ounce of cold pressed *castor oil*, and if it does not act as a purgative in the course of an hour or two, let its operation be aided by a clyster or injection. This treatment soon puts an end to the complaint.

BILIOUS COLIC.

DESCRIPTION.

This species of colic seems to depend upon a super-abundant, or morbid secretion of bile, and remotely upon noxious or deleterious effluvia of the atmosphere. It occurs more generally in the fall after sultry and wet weather. The cause seems to be very nearly connected with that of bilious remitting and intermitting fever.

CAUSES.

Dr. Gregory states that bilious colic is closely allied to bilious diarrhœa and cholera occurring along with them, and apparently differing from them only in some unessential features. It would appear that bilious colic is occasioned oftener by a deficiency of biliary secretion, than a redundancy of it. This may be inferred from the want of the customary stimulus of bile imparted to the intestines, giving rise to the most obstinate costiveness, and there is no doubt but that the quantity of the bile also is very acrid, or vitiated, and which causes such a morbid and irritable state of the stomach.

The intermediate cause of the complaint seems to be a derangement in the capillary vessels, which do not eliminate the ordinary morbid agents, and which mixes with the blood, is carried to the inward parts, and there is an effort of the system to expel them through the medium of the liver, stomach, and intestines. Acrid bile pent up in the intestines, becomes literally a *poison* to the system, and is the occasion of many very anomalous symptoms.

SYMPTOMS.

The bilious colic generally seizes the patient about the beginning of

summer, with a vomiting of a yellow greenish cast; a bitter taste in the mouth, with great heat; circumscribed pain about the region of the navel; sometimes with most excruciating pain all over the abdomen; then shifting from place to place; little or no discharge of urine; a pulsation in the abdomen, with a sense of cold about it: frequently it is attended with a hoarseness, which continues during the whole stage of the disease, with thirst, fever, and costiveness; and sometimes terminates in the iliac passion.

"Bilious colic," says a writer, "is ushered in with head-ache, loathing of food, a bitter taste in the mouth, and very often bilious vomiting; but the urgent symptoms are distention and griping pains of the bowels, urgent pain of the loins, and obstinate costiveness, or at most *tenesmus*, the motions being very scanty and partly slimy. The continuance of such an irritation for a short time usually leads to fever; and bilious colic is therefore frequently complicated with the more general affection, bilious fever. In this particular variety of fever, there is often considerable head-ache, for the most part referred to the forehead. The tongue is loaded, the fur upon it being often yellow, and in streaks. There is besides, much thirst, a short dry cough, restlessness, and exceeding languor and lassitude, the pulse being seldom much accelerated, or the heat of skin very apparent. In irritable habits, hysterical symptoms frequently show themselves."

"In this state of the disease, if a discharge of feculent bilious matter can be obtained, the symptoms generally yield; but it is sometimes difficult to procure evacuations of this character, on account of the irritability of the stomach. Where bilious stools are not brought away, it is common to find chocolate-coloured motions passed, often in vast quantity, reducing the patient to a state of great weakness. If by the fortunate combination of medicines, or by the efforts of nature, the irritating cause is removed, the tongue becomes clean, appetite returns, and the patient recovers strength."

DISCRIMINATION.

The colic is to be distinguished from inflammation of the bowels by the spasmodic contraction of the abdominal muscles, by the absence or trifling degree of fever, by the state of the pulse, which is frequent but full, and by the diminution of the pain upon the pressure of the abdomen: whereas in enteritis, there are no spasms, but a considerable degree of fever, the pulse is quick and small, and the abdomen extremely tender to the touch."

PROGNOSIS.

When the pain remits, or shifts its situation, not being obstinately confined to one place, and when the patient experiences considerable ease after a discharge either of wind or fæces, and stools are obtained, we may have reason to expect a favourable termination to the disease; but the sudden cessation of pain, with the costiveness remaining obstinate, cold sweats breaking out, a weak tremulous pulse, frequent syncope, and the ensuing of hiccup, denote supervening inflammation terminating in a gangrene.

DISSECTION.

When the disease proves mortal, the usual appearances to be observed on dissection are, inflammation on the surface of the intestines, distension and irregular contraction of some particular part of the tube, or a passing of one portion of it within another to a considerable extent, the part received within the other being in a contracted state, or probably gangrenous.

COMMON PRACTICE.

Bleeding, mercury, antimony, blistering, &c.

REFORMED PRACTICE.

Indications of Cure.—The indications of cure in this disease are,

1. To allay the irritability of the stomach.
2. To evacuate the bowels of their acrid contents.
3. To remove spasms, irritation or urgent symptoms.
4. To excite a healthy secretion of the liver.

The most distressing symptoms of the complaint are nausea, retching, and vomiting; and therefore the first attention of the physician seems naturally directed to the stomach; indeed, very little can be done by way of medicines, until this irritable state of the stomach is allayed. Something, therefore, must be prescribed calculated to accomplish this object. Let the following be administered;

Take Bi-carbonate of Potash, 1 dram.

Distilled Peppermint Water, eight ounces.

Laudanum, a tea-spoonful, Mix.

Of this give a small table-spoonful every half hour, or as often as vomiting occurs, and when it is allayed, give the purgative combined with aromatics, as directed under the head of 'flatulent colic.'

Should not this act upon the bowels, or should it not afford relief in a few hours, or in a reasonable time, let it be followed up by the administration of a double portion of our *Common purgative*, or anti-bilious physic. The liver and stomach are sometimes in such a very torpid state, that even these active cathartics are insufficient to evacuate the contents of the intestines. When this happens, *clysters* or *injections* become the anchor of hope, or the only alternative. Those which are properly prepared, and of the right materials, exert a most powerful, sovereign, and salutary effect in this disease.

They remove the spasms and griping pains, stimulate the intestines, by which their contents are discharged, as well as allay the nausea and vomiting.

The common injection may first be given, such as is mentioned under the head of 'Dysentery.' This, in general, is sufficient—but sometimes, those more stimulating are necessary. In such a case, let the following be given:

Take Lobelia Inflata, a tea-spoonful.

Capsicum, do.

Slippery Elm Bark, do.

Add a quart of Boiling Water. Mix.

After standing a short time, strain, and add half a pint of sweet milk, half a pint of molasses, a gill of sweet oil, and half an ounce of laudanum. Introduce as much of this injection as the patient can bear, to be repeated every hour or two, until evacuations are procured or relief obtained.

The next step in order will be the use of *fomentations* to the stomach and bowels. *Hops*, *catnip*, *wormwood*, and *tanzey* may be boiled with vinegar and water, and inclosed in flannel or muslin, and applied over the whole abdomen, as warm as the patient can bear; to be often renewed.

When the patient has submitted to this treatment, should the disease still continue unsubdued, or should there be much pain, administer a pill made of the pure *Turkey opium*, the size of a pea, which contains three grains. If the first does not have the desired effect in two hours, repeat it, or let another be given.

It is sometimes the case, that the disease assumes such a very violent character, that it becomes necessary, at the very onset, to give an anodyne, and it will sometimes be followed by an excellent effect. It will put a stop to the vomiting, allay the irritation of the intestines by its anti-spasmodic and relaxing properties, and prepare the way for purgatives.

Again, I have seen the system in such a state, under the influence of bilious cholera, that nothing could be made to pass the bowels, until perspiration was promoted. It therefore will be necessary to give *sudorific* medicines. *Catnip* and *peppermint tea* should be freely drank, the feet bathed in warm ley water, and bricks heated and covered in cloths, wet in vinegar, applied to the legs and sides of the body. Where the disease is very violent and severe in its character, in conjunction with the means recommended, it may be necessary to use the warm bath.

After the bowels have been freed, and the symptoms mitigated, occasional purgatives or injections may be necessary to prevent a relapse.

Occasionally a case has occurred where the following preparation has apparently answered better than any other :

Take Epsom Salts, eight ounces.
Muriatic Acid, half an ounce.
Boiling Water, eight ounces. Mix.

Dose, a table-spoonful every hour, in half a tumbler of water, till it acts as a laxative.

PAINTER'S COLIC. (*Pictonum*.)

DESCRIPTION.

THIS species of colic differs from the other in some respects, more particularly as regards its severity or violence, and the paralytic symptoms attending it. It is characterized by very obstinate costiveness, with a vomiting of acrid bile, severe pains about the region of the na-

vel, and shooting from thence to each side, with great violence ; strong spasms in the intestines, and muscles of the abdomen.

CAUSES.

It is occasioned by long-continued costiveness ; by an accumulation of acrid bile ; by cold applied either to the extremities or to the belly itself ; by a free use of unripe fruits ; by great irregularity in the mode of living ; by acrid food or drink, such as sour wines or cider ; and by the inhalation of vapours arising from a decomposition of lead, or frequently handling some of its chemical preparations ; hence painters and glaziers are frequently attacked by it. From the disease occurring frequently in Devonshire, (England) and other cider counties, it has generally been supposed to arise from an impregnation of lead received into the stomach ; and it seems now to be perfectly understood that the malic acid of the apple takes up in solution a portion of the lead of the vats employed in manufacturing the cider, which soon acts on the stomach of those who drink this liquor abundantly, and produces the disease in question.

SYMPTOMS.

The painter's colic comes on gradually with a pain at the pit of the stomach, extending downwards to the intestines, particularly round the navel, accompanied by eructations, slight sickness at the stomach, thirst, anxiety, obstinate costiveness, a frequent but ineffectual desire to evacuate the contents of the bowels, and a quick contracted pulse, but seldom exceeding one hundred in a minute. After a short time the pains increase considerably in violence, the whole region of the belly is highly painful to the touch, the muscles of the abdomen are contracted into hard irregular knots or lumps ; the intestines themselves exhibit symptoms of violent spasm, insomuch that a clyster can hardly be injected from the powerful contraction of the sphincter ani ; and there is constant restlessness, with a frequent vomiting of an acrid or porraceous matter, but more particularly after taking either food or medicine.

Upon a further increase of the symptoms, or their not being quickly alleviated, the spasms become more frequent as well as violent, the costiveness proves invincible, and an inflammation of the intestines ensues, which soon destroys the patient by terminating in gangrene. In an advanced state of the disease it is no uncommon occurrence for dysuria to take place in a very high degree.

DISCRIMINATION.

Due attention will be necessary in distinguishing accurately between enteritis or inflammation of the bowels and painter's colic. The symptoms which characterize the latter, and distinguish it from the former, are these : the pain at first is rather more in the pit of the stomach ; it afterwards fixes itself at the navel, and thence darts in all directions over the abdominal viscera, accompanied by such a retraction of the abdominal muscles, as to oblige the patient to lean forward, as the only posture in which he feels at all easy, whilst at the same time the circulation does not appear to be affected. In enteritis the abdomen is tu-

mid, hard, and painful, but the pain seems concentrated, and does not diverge as in those spasmodic twitchings or dartings observed in colica pictonum: moreover the pulse is quick, although usually small. In colica pictonum, besides the rigidity and retraction of the muscles, the belly seems pressed down towards the spine with a force proportional to the degree of spasm. In inflammation of the bowels there is little or no spasm; but in the other disease, there is soon perceived a disposition to paralysis in the extremities, and often a contraction of the joints, which never take place in enteritis or inflammation of the bowels.

The palsied and dropping hand, and slightly contracted fingers, unaccompanied by spasm in the upper extremities, or by any affection of the lower, supervene with remarkable uniformity in the colic to which painters and glaziers are liable from constantly handling white lead.

Colica pictonum is always attended with some degree of danger, but which is ever in proportion to the violence of the symptoms and the duration of the disease.

TREATMENT.

The treatment in this species of colic is nearly the same as in the bilious. The means in general, however, require, if practicable, to be more prompt and energetic. I usually commence the treatment of the painter's colic—

1. By giving medicine to allay the vomiting, the same as in bilious colic.
2. Administer *cathartics*, and dislodge the irritating and acrid agents from the intestines.
3. Remove the spasms, irritation, &c. by *injections*, *anodynes*, and *sudorifics*.

After the vomiting has in some degree ceased, or before, if the alkaline medicine does not allay it, give fifty of the *black drops*, and repeat every hour until the pain subsides; then give a double portion of the *anti-bilious physic*, every two hours, until the bowels are evacuated, to be aided by *injections* and *fomentations*, as in bilious colic.

I have found the warm bath of very great service in the painter's colic. It should be made hot, and the patient should be kept in as long as possible. I remember one case where the patient was, for a length of time, senseless, from the violence of the pain, and where the hot bath with other means soon restored him to health. Indeed, the treatment laid down, is invariably successful in every species of colic, never yet having lost a single case; while those, labouring under this disease, who have submitted to the common practice, have been bled, mercurialized, blistered, and destroyed.

Dr. Luckey, formerly of Elizabethtown, has published the result of a very large experience, with *opium* and *castor oil*, in the present disease. Foiled by the ordinary modes of practice, he resorted to the use of powerful doses of opium, followed by castor oil, and always with the happiest effects. "I began," says he, "by administering large doses of opium, and generally gave ten grains at a dose, every hour, until two scruples were taken. I was exceedingly rejoiced to find that the symptoms now began to yield, and a few common doses of oleum ricini, or

the infusion of senna, would produce the desired effect. Of forty cases which occurred in my practice, none, except one, proved fatal after the adoption of this practice."

The prevalence of this disease arose from the country people in the vicinity of Elizabethtown, putting up their *apple-butter*, during the fall of 1814, in earthen vessels badly glazed, got from a neighbouring pottery. The acid of the apple-butter acting upon and dissolving the glaze of the crocks, (composed of red-lead) converted into acetate of lead, which, being received into the system, with the apple-butter, gave rise to this disease.

CHAPTER III.

COSTIVENESS. (*Constipatio.*)

A CERTAIN state of the bowels may be either constitutional or symptomatic; generally the latter. There is a retention of the excrements, attended with hardness and dryness of the evacuations, which are often difficult, and sometimes painful.

Sedentary persons are peculiarly liable to this complaint, especially those of a sanguineous or choleric temperament; or who are subject to hypochondriac affections, the gout, acute fevers, or a diseased state of the liver and spleen.

Costiveness is frequently occasioned by neglecting the usual times of going to stool, and checking the natural tendency to those salutary excretions; by an extraordinary heat of the body, and copious sweats; by receiving into the stomach a larger proportion of solid food than is proper for the quantity of fluids swallowed; by a free use of opium, and by taking food that is dry, heating, and difficult of digestion. Drinking freely and frequently of Port wine may likewise occasion costiveness.

With the defect of stools there sometimes exist nausea, want of appetite, flatulency, pains in the head, and a degree of febrile heat.

TREATMENT.

This disease is to be obviated by an attention to diet; by observing certain regular periods for soliciting motions; and where these fail, by having recourse to laxatives.

The diet of such as are of a costive habit ought to consist much of vegetables and ripe fruits, and their ordinary drink of malt liquors.

With respect to the second object to be attended to, a habit of regularity should be endeavoured to be established by the person's going at a certain hour or hours each day, and making proper efforts at each period for promoting an evacuation. If a natural inclination arises at any time, this ought likewise to be encouraged.

The laxatives most proper for obviating costiveness are those which afford the least irritation, but which will at the same time procure one or two motions daily.

The anti-dyspeptic pills should be given daily, in the commencement; and afterwards occasionally; but it is necessary to obtain a regular state of the bowels, by exercise, food, &c.

The use of every purgative medicine creates a necessity for its repetition, and by this repetition the bowels lose their energy, their delicate nerves become torpid to the stimulus of the food and drink, and the secretions formed from them. A natural discharge of the contents of the bowels ought therefore to be solicited by those of a costive habit, in preference to the habitual use of any kind of purgative whatever.

The brown bread is exceedingly valuable to obviate costiveness; also, stewed apples, peaches, and all kinds of ripe fruits are excellent. I find that most cases of costiveness arise from want of exercise, and nothing will supply the place of it; it should be punctually practised, and brisk frictions should be made upon the abdomen, and it should be daily "kneaded."

Wheat bread should be avoided; also, all astringent articles, spices, &c.

CLASS IX.

PROFLUENT DISEASES.

CHARACTER.

By this class of diseases is to be understood such as are characterized by a preternatural discharge of blood, or some fluid from the system produced in most cases, by muscular debility, or relaxation of the muscular fibre.

CHAPTER I.

VOMITING OF BLOOD. (*Hæmatamæis*.)

DESCRIPTION.

By this disease we understand a discharge of blood by the mouth, generally in a considerable quantity, attended with retching and vomiting, and without its being characterized by those symptoms attendant on hæmoptysis or bleeding at the lungs.

CAUSES.

This disease may arise from wounds, blows, bruises, or any thing which causes too great a flow of blood to this organ, from a suppression of the menses, or the bleeding piles, or it may be symptomatic of some other diseases. It more generally however arises from debility, from a relaxation of certain blood vessels, &c.

SYMPTOMS.

A vomiting of blood is readily to be distinguished from a discharge from the lungs, by its being usually preceded by sense of weight, pain, or anxiety in the region of the stomach; by its being unaccompanied by any cough; by the blood being discharged in a very considerable quantity; by its being of a dark colour, and somewhat gumous; and by its being mixed with the other contents of the stomach.

COMMON TREATMENT.

Bleeding, blistering, mercury, &c.

REFORMED PRACTICE.

If the disease arises from a suppression of the menses, let means be taken to restore them by appropriate remedies; and in all cases, it will

be necessary to divert the blood from the seat of the complaint to its original channels. The feet must be bathed, and perspiration promoted, or restored.

I have found purgatives very useful. They may be given about once a week, or according to the urgency of the symptoms. This will remove the oppression and load at the stomach, and sense of fulness which accompanies the complaint, and by its revulsive effects, will heal the diseased blood vessels.

If called to suppress a copious bleeding from the mouth, it will be necessary to administer astringents. A little common salt will often suppress the discharge, or a little alum whey. If these fail, give a decoction of *beth root* and the *black cohosh*: After the hæmorrhage is stopped, strengthening medicine, must be given; and the *restorative cordial* and *wine bitters* are very valuable. The *anti-dyspeptic pill* should be given to keep the bowels in a soluble state, and even though the bowels be soluble, a *purgative* must be occasionally administered.

The patient should exercise moderately, and should never fatigue or strain himself in any way. He should avoid sudden transitions from heat to cold, and he will find it serviceable to wear a *strengthening plaster*, to the pit of the stomach.

His diet should be light, but nutritious. The patient may drink a cold decoction of the bugle weed or water hoarhound (*Lycopus Virginicus*) for his constant drink. It is *tonic* and *astringent*.

CHAPTER II.

SPITTING OF BLOOD. (*Hæmoptysis*.)

DESCRIPTION.

THIS disease is characterized by coughing up florid or frothy blood, preceded usually by heat, or pain in the chest, irritation in the wind pipe, and a saltish taste in the mouth.

It is readily to be distinguished from hæmatemesis, or vomiting of blood as in this last, the blood is usually thrown out in considerable quantities; and is, moreover, of a darker colour, more gumous, and mixed with the other contents of the stomach; whereas blood proceeding from the lungs is usually in small quantity, of a florid colour, and mixed with a little frothy mucous only.

CAUSES.

A spitting of blood arises most usually between the ages of sixteen and twenty-five, and may be occasioned by any violent exertion either in running, jumping, wrestling, singing loud, or blowing wind-instruments; as likewise by wounds, plethora, weak vessels, hectic fever, coughs, irregular living, excessive drinking, or a suppression of some accustomed discharge, such as the menstrual or hæmorrhoidal. It may

likewise be occasioned by breathing air which is too much rarified to be able properly to expand the lungs.

Persons in whom there is a faulty proportion, either in the vessels of the lungs, or in the capacity of the chest, being distinguished by a narrow thorax and prominent shoulders, or who are of a delicate make and sanguine temperament, seem much predisposed to this hæmorrhage; but in these, the complaint is often brought on by the concurrence of various occasional and exciting causes before mentioned.

A spitting of blood is not, however, always to be considered as a primary disease. It is only a symptom, and in some disorders, such as pleurisies, peripneumonies, and many fevers, often arises, and is the presage of a favourable termination.

It is said that the disease has been produced by pricking or wounding the auditory nerve.

SYMPTOMS.

Sometimes it is preceded, as has already been observed, by a sense of weight and oppression at the chest, a dry tickling cough, and some slight difficulty of breathing. Sometimes it is ushered in with shiverings, coldness at the extremities, pains in the back and loins, flatulency, costiveness, and lassitude. The blood which is spit up is generally thin, and of a florid red colour; but sometimes it is thick, and of a dark or blackish cast; nothing, however, can be referred from this circumstance, but that the blood has lain a longer or shorter time in the breast, before it was discharged.

An hæmoptoe is not attended with danger, where no symptoms of phthisis pulmonalis or consumption have preceded or accompanied the hæmorrhage, or where it leaves behind no cough, dyspnœa, or other affection of the lungs; nor is it dangerous in a strong healthy person, of a sound constitution; but when it attacks persons of a weak lax fibre, and delicate habit, it may be difficult to remove it.

It seldom takes place to such a degree as to prove fatal at once; but when it does, the effusion is from some large vessel. The danger, therefore, will be in proportion as the discharge of blood comes from a large vessel, or a small one.

When the disease proves fatal, in consequence of the rupture of some large vessels, there is found, on dissection, a considerable quantity of clotted blood in the lungs, and there is usually more or less of an inflammatory appearance at the ruptured part. Where the disease terminates in pulmonary consumption, the same morbid appearances are to be met with as described under that particular head.

COMMON TREATMENT.

Bleeding, blistering, &c.

REFORMED PRACTICE.

For the bleeding, the same treatment pursued as pointed out under the preceding disease: in addition to which, a strong decoction of the *bugle weed* must be taken freely, and cold as soon as the hæmorrhage has sub-

sided, in order to prevent a recurrence of it, the *vegetable syrup* should be taken, and the ordinary course pursued to equalize the circulation.

The tincture of *digitalis*, has, in many cases, proved serviceable. Fifteen or twenty drops may be taken three or four times a day. This complaint is often a forerunner of the consumption, or connected with it, and it will therefore be necessary to take such medicines as are recommended under that head, provided the above does not cure.

I lately attended a case of this kind, where the patient bled two or three gallons, and yet he recovered.

Indian Method of Curing Spitting of Blood.

[Communicated in a letter to the late Dr. Mease.]

The following case is a very extraordinary one; but I know the gentleman to be a man of veracity, and had this account from his own mouth. He was of a thin, hectic constitution, and laboured under a troublesome pulmonary cough for some years; at last he was taken with an hæmoptoe, for which he had the best advice he could get in Maryland, but he grew rather worse under the care of two physicians who attended him for several months; and at last he was prevailed upon to put himself under the care of a negro fellow, who is the Ward of Maryland; for he has the reputation of performing some extraordinary cures, though nature has the chief claim to them; but indeed this was not the case here.—In short, he advised the gentleman to go into a warm bath twice a day, and sit up to his chin in it, for two or three minutes at a time, and as soon as he came out to dash cold water several times on his breast, and to wear flannel next his skin. This method soon relieved the gentleman; and when I left Maryland, which was about seven or eight years after the cure, he remained free from his hæmoptoe, eased very much of his cough, and went through a good deal of exercise.

CHAPTER III.

BLEEDING AT THE NOSE, (*Epistaxis*.)

DESCRIPTION.

IN the nose there is a considerable net-work of blood-vessels expanded on the internal surface of the nostrils, and covered only with a thin tegument: hence, upon any determination of a greater quantity of blood than ordinary to the vessels of the head, those of the nose are easily ruptured. In general the blood flows only from one nostril; but in some cases it is discharged from both, then showing a more considerable disease.

Persons of a sanguine and plethoric habit, and not yet advanced to manhood, are very liable to be attacked with this complaint; females being much less subject to it than males, particularly after menstrua-

tion has commenced. Peculiar weakness in the vessels of the part, and the decline of life, may also be considered as predisposing causes. Great heat, violent exertion, external violence, particular postures of the body, and every thing that determines the blood to the head, are to be looked upon as its exciting causes.

Bleeding at the nose comes on at times without any previous warnings; but at others, it is preceded by a pain and heaviness of the head, vertigo, flushing in the face, heat and itching in the nostrils, a throbbing of the temporal arteries, and a quickness of the pulse. In some instances, a coldness of the feet, and shivering of the whole body, together with costiveness, are observed to precede an attack of this hæmorrhage.

TREATMENT.

In general, bleeding at the nose soon ceases; but this is not always the case. It sometimes proves very serious. When a person has bled from the nose some length of time, it is necessary to take proper means to check it. And in most cases, it may easily be done, by diverting the blood from the head, and throwing it back to the extremities and surface, and this must be effected by the usual means to *equalize the circulation*. The feet must be immediately immersed in a tub of warm ley water, and *hysop* or *pennyroyal* tea must be taken to produce perspiration.

This will generally stop it in every case. If this fail, let a little cold water be applied to the nape of the neck, the head, and the face. At the same time a little of the pulverized *bayberry bark* may be introduced up the nostrils by means of a probe to which a little piece of linen is fastened. If this fail, let a piece of lint rolled into a little ball, and dipped in alum water, be introduced into the nostril as far up as possible. After this, a coagulum will form, and it will be stopped.

Some time ago, I was called to a case where the person had bled from the nose, several days, and become exceedingly reduced; and all the means he had used, afforded him no relief. I pursued only the means recommended, to equalize the circulation, and it soon cured him. As soon as his chill was removed by perspiration, the bleeding stopped.

A few years ago, I was walking along Chatham-street, in this city, when my attention was arrested by a person who was bleeding freely at the nose. I stepped up to him, and rendered him such aid as was then in my power, not having any suitable medicine with me. I applied cold water to his neck and head without any effect. While the man was bleeding, a person rushed through the mob who stood gazing at the man, and with one of his fingers thrust up a powder into his nostrils. In a few minutes it entirely checked the bleeding. The person afterwards disclosed the remedy to a friend of his, or one of the bystanders who communicated it to me. It consisted in nothing more or less than dried or smoked beef finely grated, and which makes a very handsome brown powder. This medicine, which he kept as a nostrum, he stated had cost him \$500, and he afterwards expressed a regret when he heard that it had been communicated to a physician. Upon enquiry, I found the person to be a no less personage than the

honourable High Constable Hays, who afterwards was very communicative with me upon the subject.

I have since tried the same medicine with success. The powder must be introduced as far up the nostril as possible. The property of this article depends probably upon the salt which it contains, and the mechanical agency produced, may likewise exert a beneficial effect.

CHAPTER IV.

INVOLUNTARY DISCHARGE OF URINE. (*Diabètes.*)

DESCRIPTION.

THIS disease is characterized by large quantities of urine, and often an involuntary discharge of the same: It is accompanied with great debility; costiveness, fever, voracious appetite, emaciation; a large proportion of saccharine and other matter which is generally voided in a quantity far exceeding that of the aliment, or fluid taken into the system:

CAUSES.

Sometimes it arises from the use of spirituous liquors; from debility; from cold; from diuretic medicines; poor diet; depressing passions; an impoverished state of the blood, &c. It is thought to be occasioned by a perverted or diseased action of the kidneys.

Diabetes makes its approaches very insiduously. The first symptoms usually complained of are lassitude, weakness, a disposition to sweating on slight exertions, and head-ache. Sometimes a diseased state of the urine advances to a considerable extent, and subsists for some time; without being accompanied by any strongly-marked constitutional disturbance, and occasionally even without attracting the notice of the patient: The most striking symptom of the disease is an increase in the quantity of the urine. This varies very much in different cases, and is for the most part a good index of the violence of the disease. The largest quantity which I have seen recorded as having been passed in twenty-four hours, is thirty-six pints; and it is not uncommon to find from twenty to thirty pints discharged daily for weeks; or even months together. The average quantity may perhaps be stated at twelve or fifteen pints; and it is a remarkable fact, that in many instances it exceeds the whole amount of solid and fluid. The secretion of so much urine is almost necessarily attended with a frequent desire to pass it. The patient is generally compelled to rise three or four times in the night for this purpose. [Thomas.]

The urine of diabetes is of a pale straw colour. Its smell is commonly faint and peculiar, sometimes like sweet whey or milk. Its taste is, with few exceptions, decidedly saccharine, or sweet; in a greater or less degree. Even if this should not be perceptible in the first instance,

it may often be detected when the urine is concentrated by evaporation. In many cases the saccharine quality of the urine is occasionally suspended; and this happens both spontaneously, and from the influence of medicine. Of the fact, that sugar is secreted by the kidney in this disease, no doubt can be entertained. It is confirmed by the repeated experiments of chemists in all countries. The quantity of sugar formed is in most instances directly proportioned to the degree of *diuresis*. If a patient passes twelve pints of urine in a day, of the specific gravity 1035, he voids in that time above sixteen ounces and a half of solid matter. The quantity, however, is in many cases much greater than this.

Other important symptoms occur in diabetes besides those now specified. The appetite is usually much greater than in health; though digestion is seldom if ever perfect. There is uneasiness therefore in the stomach after meals, with flatulence, acid eructations, and irregular bowels. Thirst is a never-failing source of complaint, and often attracts the notice of the patient before he is sensible of the true nature of his case. The skin is dry, and has a peculiarly rough and parched feel, from the total want of perspiration. The gums are often swelled, tender, and red; sometimes ulcerated. The breath has a sub-acid odour. The tongue is white and foul in the centre, with bright red edges. The mouth is dry and parched, and the taste depraved. The patient will generally be found to complain of some pain or sense of weakness in the loins. Phymosis and excoriations on the penis are frequently noticed. Besides these, there occur in almost all cases symptoms indicating general weakness or exhaustion, such as swelled legs, emaciation, coldness of the feet, dyspnoea on the slightest exertion, a sense of weight at the epigastrium, with tendency to syncope, general languor, lassitude, and depression of spirits. Early in the disease the pulse is seldom affected; but in its progress hectic fever supervenes, and the pulse becomes frequent, feeble, and irritable.

The duration of diabetes is very variable. An instance is recorded where it ran its course, and proved fatal, in five weeks. On the other hand, it has been known to last for several years, and ultimately to wear out the constitution.

TREATMENT.

The common treatment in this disorder, is so various and opposite, that it is impossible to state in what it consists, except it be said in a word, that it is strictly empirical.

The indication of cure will be to adopt such a course of treatment, as will restore the tone of the system, which must be effected by restorative medicines. If there is nothing to contra-indicate, give a mild *emetic* of the pulverized *ipecacuanha root*, and after this has operated, let attention be paid to every secretion and excretion of the system. The bowels should be kept regular, the skin moist, and the feet warm.

Let the patient take the following decoction:

Take Beth Root.

Black Cohosh.

Crane's Bill. Equal Parts.

Pulverize, and to a table-spoonful of the powder, add a pint of boiling water, and let it be drank cool or cold through the day. It may be changed, after drinking it a few days, for the use of an infusion of chamomile. During the same time, let the following tonic preparation be taken:

Take Spikenard.

Solomon's Seal. Equal parts.

Bruise or pulverize. To an ounce of this, add a quart of Port wine, and let the patient take from half a wine-glass to a wine-glass, three or four times a day, before eating.

A mild *laxative* pill should be taken to keep the bowels regular; and for the febrile symptoms and irritation, let eight grains of the *Diaphoretic Powders* be taken at bedtime, and at the same time, let the *surface* be bathed over with *tepid ley water*.

If, after using the above means, the disease is not removed, or the patient does not grow better, give three *capsicum pills* in the morning, and three at night, to be accompanied with the use of the *restorative cordial*. A *strengthening plaster* to be applied to the small of the back.

Should the disease still prove obstinate, the *wine bitters* may be taken; the *emetic* occasionally repeated, and perspiration promoted, with the use occasionally of a purgative, consisting of the pulverized *mandrake* and *cream of tartar*.

The tepid bath, during the treatment, should be used every other day. All these means are calculated to excite a healthy action of the system, and remove the disease by imparting tone and energy.

REGIMEN.

Diet has great influence sometimes in curing this disease. Doctor Willoughby L. Lay, of Branford, Connecticut, cured a very difficult case of diabetes, which had resisted every other mode of treatment, by means of diet, which consisted simply of broiled beef-steak, well cooked and thoroughly chewed or masticated, without bread or vegetables of any kind, and this was taken three times a day in small quantities, and very little drink. One or more physicians had previously tried in vain to cure the disease.

CHAPTER V.

WHITES, OR FLUOR ALBUS. (*Leucorrhæa*.)

DESCRIPTION.

WE understand by this disease, an increased secretion or discharge of mucus from the vagina, which consists of a thin, white, or yellow matter, and is attended with some degree of fœtor and pain in making water, accompanied also with pain in the back and loins, with considerable debility. It is stated that in some cases the discharge is so acrid

as to produce symptoms on those who are connected with the woman, somewhat similar to the venereal disease, causing excoriations about the penis, and a discharge from the urethra.

CAUSES.

Debility is one great cause of this complaint, and this may be occasioned by immoderate coition, injury done to the parts by difficult and tedious labours, frequent miscarriages, immoderate flowing of the menses, excessive evacuations, and a sedentary life. Delicate women are very subject to this disease.

DISCRIMINATION.

It is very important for the practitioner to discriminate between this disease and gonorrhœa, as much mischief and injury is often occasioned by inability to discriminate between the two complaints. There is often such a similarity between them that without considerable discernment one may be mistaken for the other, and in consequence of which, the health and reputation of the patient will be in jeopardy, as well as the character of the physician. Gonorrhœa commences a short time after copulation with an impure woman, and it is attended with a burning sensation, pain and scalding in making water, with more or less symptoms of inflammation, while in fluor albus these symptoms are seldom, if at all present.

Again, fluor albus partakes more of a chronic character, which continues a length of time without much change, and the discharge is more like jelly, or whiter than in gonorrhœa, although this symptom often varies. Sometimes it often has the symptom of pus or matter, and there is considerable weakness of the whole system, and particularly pain in the back and loins.

SYMPTOMS.

The disease shows itself by an irregular discharge from the uterus and vagina, of a fluid, which in different woman varies much in colour, being of a white, green, yellow, or brown hue. In the beginning it is, however, most usually white and pellucid, and in the progress of the complaint acquires the various discolorations, and different degrees of acrimony; from whence proceeds a slight smarting in making water. Besides the discharge, the patient is frequently afflicted with severe and constant pains in the back and loins, loss of strength, failure of appetite, pain in the stomach, dejection of spirits, paleness of the countenance, chilliness, and languor.

The sleep is disturbed by fearful dreams, and affords but little refreshment. The woman becomes pale and emaciated, her eyes are dull, and a flushing of the face is alternated by a ghastly paleness. In process of time the feet and ankles swell, palpitations and a difficulty of respiration are experienced; the mind is dejected, apprehensive, and occasionally affected with melancholy. Very frequently the functions of generation are greatly injured, and sterility is often the consequence thereof. Hysteria also, in a greater or less degree, is generally a con-

comitant of leucorrhœa: the urine is turbid, and the menstrual discharge is sometimes scanty, and even suppressed: at others, it is too copious, irregular, or attended with much pain.

The disease is seldom removed but by artificial means; and where these are long deferred, it proceeds to waste the constitution with accumulating mischief. Every symptom becomes highly aggravated, the eyelids and face swell, are bloated and disfigured, the body is wasted and debilitated; and hectic fever, with its doleful train, and dropsy in every form, supervene, and terminate a miserable existence. In some cases prolapsus uteri, and ulcerations, are to be met with.

COMMON TREATMENT.

Bleeding, mercury, antimony, oil of vitriol, alum, sulphate of zinc, copperas, tincture of cantharides, &c.

REFORMED PRACTICE.

The chief object of the physician should be, in treating the disease, to import tone and energy to the system. This course, will, in most cases, be attended with success. If the stomach is in a disordered state, a mild *emetic* may be given, but in general, it is sufficient to commence with the exhibition of a moderate purgative; after which give the following drops:

Take Oil of Sweet Almonds, two parts.
Balsam Copaiva, one part.
Sweet Spirits of Nitre, two parts.
Spirits of Turpentine, one part. Mix.

Of this let the patient take half a tea-spoonful or half a dram in a wine glass of milk, or any kind of tea, three times a day, before eating, to be taken on an empty stomach.

While the patient is using this, or a short time after, according to the severity of the disease, the following tonic preparation may be given:

Take Columbo Root.
Gentian Root.
Chamomile Flowers.
Fennel Seed.

Bruise the whole, and to an ounce of the powder, add a quart of Port wine. From half a wine glass, to a wine glass may be taken three or four times a day. This preparation gives strength to the system, and generally soon diminishes the complaint. While the patient is using these preparations, an adhesive or strengthening plaster should be put upon the back.

If the patient is very restless, and complains of much pain, give ten grains of capsicum, combined or mixed with six grains of the diaphoretic powders, to be taken at bedtime.

Should the disease continue after the exhibition of these medicines, let the following decoction be injected up the vagina:

Take White Oak Bark,
Sumach Berries, or Bark,
Bark of Witch Hazel,
Hemlock Bark.

Bruise or pulverize, and make a strong concentrated decoction, and to every pint, add one dram of pulverized alum. Let it be injected with a female syringe, morning and night; and if this injection, with the preceding remedies does not effect a cure, the patient may take the following:

Take Beth Root,
Spikenard,
Solomon's Seal,

Bruise, and to every ounce, add a pint of sweet wine. Dose, a wine-glass. A strong infusion or tea of the same preparation may be taken.

I have cured this disease, when other means have failed, by giving only the *alterative syrup*, and which may be used, provided it remains very obstinate. Strong tea and coffee must be avoided. Exercise must be taken and the bowels kept regular.

CHAPTER VI.

IMMODERATE FLOW OF THE MENSES. (*Menorrhagia*.)

DESCRIPTION.

THERE is sometimes an immoderate flow of blood from the womb. When the menses return more frequently than is natural, when they continue longer, or are more abundant, it is termed *Menorrhagia*. The disease is accompanied with bearing, or pressing down, and pains in the back and abdomen.

CAUSES.

Whatever produces too great a determination of blood to the womb, may give rise to the disease, such as too much exercise, strains, injuries, violent passions of the mind, check of perspiration, abortion, difficult or tedious labours, and debility arising from any cause, such as drinking freely of warm, enervating drinks, tea and coffee, want of exercise, &c.

SYMPTOMS.

An immoderate flow of the menses arising from plethora is often preceded by head-ache, giddiness, or dyspnœa, or shortness of breath, and is afterwards attended with pains in the back and loins, some degree of thirst, universal heat, and a frequent, strong, hard pulse; but where it arises in consequence of a laxity of the organ, or of general debility, and such attacks are frequently repeated, the symptoms which attend are, paleness of visage, chilliness, laxity and flabbiness in the muscular fibres, unusual fatigue in exercise, a hurried respiration on the slightest effort, pains in the back on remaining any length of time in an erect posture, and coldness of the extremities, to-

gether with loss of appetite, indigestion, and a long train of nervous complaints.

If the disease has induced much debility by frequent and severe attacks, it is no uncommon occurrence for the feet to be affected with cedematous or dropsical swellings, particularly towards the evening, and for a paleness to take place.

In forming our prognostic in this disease, we must be directed by the nature of the cause which has given rise to it. If occasioned by a plethora, or a general fulness of the system, we need apprehend no danger, as a temporary debility will be the only inconvenience the woman will experience; but where it is produced by a laxity of the vessels of the organ, and is profuse, long-continued, and of frequent occurrence, there will always be a risk of its inducing much general debility, and other symptoms. Leucorrhœa is a common consequence of it. Where it arises from an organic affection of the part, which is sometimes the case after the age of forty-five, it is usually deemed incurable.

When menorrhagia proves fatal in consequence of a scirrhus of the uterus, this organ is observed on dissection to be much increased in size, and its substance to be thick and hard; and when cut into, shows a firm structure intersected with membranous septa. The internal surface is at the same time usually ulcerated, and beset with ragged processes, and from these ulcerated parts the hæmorrhage proceeds.

If polypi are the organic affection, these on dissection are generally to be found adhering to some part near the neck of the womb, and they are surrounded with varicose vessels, which throw out the blood in considerable quantity when a rupture of any of them happens to take place.

COMMON PRACTICE.

Bleeding, blistering, mercury, zinc, turpentine, cantharides, sugar of lead.

REFORMED PRACTICE.

When called to a female who is labouring under the active stage of this disease, or when there is excessive discharge from the womb, active means must be taken to suppress it. The feet must be immediately immersed in warm water, and if there is great pain in the abdomen, a fomentation of *hops* and *wormwood* must be applied, and the following powder given internally:

Take Diaphoretic Powders, 10 grains.

Capsicum, or Cayenne Pepper, 10 grains. Mix.

If the pain and hæmorrhage is considerable, give the whole. Otherwise, give one half, and in an hour, give the other. At the same time give a strong decoction of the *black cohush* and *beth root*. Apply cloths wet with vinegar, spirits, and rain water, to the abdomen, and over the vagina. If this does not check the discharge in a short time, let the patient take *alum whey*.

When the urgent symptoms have been removed, means must be taken to prevent a recurrence of the hæmorrhage, to effect which, give a course of tonics. A decoction of the *spikenard*, *solomon's seal*, and *beth root*, to be taken through the day; and the patient must take the *restorative cordial*, morning, noon, evening; and bedtime:

Where there is a considerable discharge from the vagina; appearing suddenly or at various periods, and which resists, in any degree, these remedies, the patient may inject once or twice a day, the decoction mentioned under the head of fluor albus or whites:

It is necessary to distinguish between an approaching miscarriage and a common flooding, which may be readily done by inquiring whether or not the hæmorrhage has proceeded from any evident cause; and whether it flows gently or is accompanied with unusual pains. The former usually arises from some fright, surprise; or accident, and does not flow gently and regularly, but bursts out of a sudden, and again stops all at once; and also is attended with severe pains in the back and the bottom of the belly; whereas the latter is marked with no such occurrence. The further a woman is advanced in pregnancy; the greater will be the danger if floodings take place, as the mouths of the vessels are much enlarged during the last stage of pregnancy, and of course a quantity will be discharged in a short time.

The treatment must differ according to the particular causes of the disease, and according to the different states of constitution under which it occurs. The hæmorrhage is more frequently of the active kind, and requires the refrigerant plan to be strictly enforced, especially obviating the accumulation of heat in every way; giving cold acidulated drink; and using cold local applications; the patient must remain quiet in the horizontal posture; the diet be of the lightest and least stimulant description; and the bowels kept freely open by cooling laxatives. Where the discharge is rather of a passive character, tonic and astringent medicines ought to be given: rest and the horizontal position are equally necessary, costiveness must be obviated, and cold astringent applications may be materially useful, or the escape of the blood may be prevented mechanically. A nourishing diet, with gentle exercise in a carriage, and the prudent use of the cold bath, may contribute to restore the patient, when the discharge has subsided.

Cold applications must not be continued too long, lest injurious effects follow their application.

I lately cured a case of this kind, which baffled all former attempts to remove it, by the treatment here laid down. The patient had become exceedingly reduced by the loss of several gallons of blood in the course of a few months. There was great debility, paleness, emaciation, &c. The medicine restored her to perfect health in a short space of time.

A physician desires me to insert the following case of uterine hæmorrhage, which occurred in his practice:

"I was called to prescribe," says he, "for a coloured woman in New-York, whose strength was prostrated by reason of uterine hæmorrhage, (flooding from the womb,) the consequence of abortion or miscarriage. On my arrival, I found that the hæmorrhage had ceased, but the pulse

was small and weak; there was considerable coldness of the extremities, nausea, with immediate vomiting of food or medicine taken into the stomach; and the bowels were too much relaxed. I therefore concluded that there was only one alternative, viz. to cleanse the first passages, so as to permit nourishment and stimulants to remain in the stomach without ejection, or else to suffer nature to take its course. You will readily perceive that there was great risk in either case; for, in the first place; by withholding medicine, and relying on the simple efforts of nature, the patient would have gradually sunk under the disease; and in the second place, the administration of an emetic might induce such prostration as to extinguish vitality at once:

"What was then to be done?

"Why, the stomach must be tranquillized; and how, thought I, can this be accomplished without first cleansing the same of its irritating and vitiated contents. I therefore ventured to prescribe an emetic of best *ipécac*, in powder of thirty grains; the half of which was directed to be administered in a little cold water, and in case the first did not act, to give the remainder; the operation of which was to be assisted by copious draughts of an infusion of *May-weed*, or *wild chamomile*. I then retired a short distance, stating where I might be found, should there be any real; or supposed danger; but in about forty minutes I was sent for in great haste, as the by-standers and friends of the patient apprehended she was dying. In a few minutes I arrived, found her unable to articulate, except in a very low whisper; the pulse was very small, weak, and somewhat frequent, requiring to be felt, firm pressure upon the artery, with coldness of the extremities; a clammy sweat appeared on the face and forehead, and she seemed not far from the borders of the grave.

I now inquired of the attendants whether the vomiting had ceased, and was answered in the affirmative.

"I think," said she, "that my stay will be very short, unless something can be quickly done." These were her words.

"Do not be alarmed," said I, (God helping) we can soon restore you."

"I am not alarmed," she replied, "I am willing to live or die, as God sees fit, for I have hope in my death."

"Then," said I, "you are safe."

I now endeavoured to allay the fears, and quiet the apprehensions of the by-standers and attendants.

Now, (thought I) although she is greatly prostrated, there is a good foundation laid for the reception and retention of stimulants and food, so obviously and imperiously demanded.

I then sent for a pint of old fourth proof French Brandy, which was immediately procured, and gave her half a gill of it diluted with a little cold water sweetened with loaf sugar, once in about five minutes, watching the rising of the pulse, and repeating the dose as circumstances indicated.

In less than 15 minutes, I had the satisfaction of seeing a visible amendment; she spoke loud, expressed her gratitude, and continued to drink the sling (although at longer intervals) until she took the whole

pint of brandy in the space of an hour. Nutritious soups, broth, jellies, and custards were now directed to be given as the stomach would bear, and within four days she was up and about the house."

CHAPTER VII.

ABORTION. (*Abortio.*)

DESCRIPTION.

Miscarriage, or the expulsion of the fœtus from the uterus, before the seventh month, is called abortion, after which, premature labour. It most commonly occurs between the eighth and eleventh weeks of pregnancy, but may happen at a later period. In early gestation, the ovum sometimes comes off entire; sometimes the fœtus is first expelled, and the placenta afterwards. It is preceded by floodings, pains in the back, loins, and lower part of the abdomen, evacuation of the water, shiverings, palpitation of the heart, nausea, anxiety, syncope, subsiding of the breasts and belly, pain in the inside of the thighs, opening and moisture of the os tincæ. The principal causes of miscarriage are blows or falls; great exertion or fatigue; sudden frights and other violent emotions of the mind; a diet too sparing or too nutritious; the abuse of spirituous liquors; other diseases, particularly fevers, and hæmorrhages; likewise excessive bleeding, profuse diarrhœa or colic, particularly from accumulated fæces; immoderate venery, &c. The spontaneous vomiting so common in pregnancy, rarely occasions this accident: but when induced and kept up by drastic medicines, it may be very likely to have that effect. Abortion often happens without any obvious cause, from some defect in the uterus, or in the fœtus itself, which we cannot satisfactorily explain. Hence it will take place repeatedly in the same female at a particular period of pregnancy; perhaps in some measure from the influence of habit.

TREATMENT.

A very similar course of treatment must be pursued in abortion, as recommended in the preceding disease, menorrhagia.

The treatment of abortion must vary considerably according to the constitution of the patient, and the cause giving rise to it.

Clear the bowels by some cathartic, directing the patient to remain quiet in a recumbent position, kept as cool as possible, with a low diet, and the cooling regimen in other respects. Should there be much flooding, cloths wetted with cold water ought to be applied to the region of the uterus, or even introduced into the vagina, to obstruct the escape of the blood mechanically. Where violent forcing pains attend, opium should be given by the mouth, or in the form of glyster, after premising proper evacuations. Should these means not avail to check the discharge or the forcing pains, and particularly if the water

be evacuated, there can be no expectation of preventing the miscarriage: and where there is reason for believing the foetus dead, from the breasts having previously subsided, the morning sickness gone off, the motion stopped, &c. it will be proper rather to encourage it by manual assistance.

If on the other hand females of a delicate and irritable habit, rather deficient in blood, be subject to abortion, or where this accident is threatened by profuse evacuations and other debilitating causes, it may be more probably prevented by a diet nutritious, yet easy of digestion, with tonic medicines, and the use of the tepid bath, attending at the same time to the state of the bowels, giving anodynes if pain attend, and carefully avoiding the several exciting causes.

When a female has suffered several abortions, it becomes almost impossible to prevent a repetition at the same period of gestation in a subsequent pregnancy. Nothing, however, will be so successful in preventing a recurrence of a similar misfortune, as in allowing the uterine vessels to recover their tone; for which purpose tonics must be given.

CHAPTER VIII.

CESSATION OF THE MENSES. (*Commonly called the "Turn of Life."*)

DESCRIPTION.

THAT period of life at which the *menses* cease to flow is likewise very critical to the sex. The stoppage of any customary evacuation, however small, is sufficient to disorder the whole frame, and often to destroy life itself. Hence it is, that so many women either fall into chronic disorders, or die about this time. Such of them, however, as survive it, without contracting any chronic disease, often become more healthy than they were before, and enjoy strength and vigour to a very great age.

If the *menses* cease suddenly, which is seldom the case, in women of a full habit, they ought to abate their usual quantity of food, especially of the more nourishing kind. They ought likewise to take sufficient exercise, and to keep the body open.

Should any scirrhus or cancerous affection of the uterus take place on a stoppage of the menstrual flux, as sometimes happens, all that can be done in such cases is to have recourse to such remedies pointed out in the diseases wherein these medicines are indicated.

CHAPTER IX.

INCONTINENCE OF URINE. (*Eneuresis.*)

DESCRIPTION.

It is pretty generally known that some children, and occasionally adults, are subject to an involuntary discharge of urine, particularly at night.

It arises from a debility of the urinary organs, occasioned by drinking great quantities of tea, coffee or ardent spirits, or by strains, or whatever relaxes the parts. It may likewise be occasioned by irritating substances contained in the bladder.

TREATMENT.

The treatment of this disease will consist in restoring the tone of the parts by the exhibition of tonics and astringents. The patient should be directed to drink a decoction made of the following articles.

Take Wild Cherry Tree Bark.

Hemlock Bark.

Bayberry Bark: Bruise or Pulverize.

Add a sufficient quantity of water to make a strong tea or decoction. While the patient is taking this decoction, let him take fifteen or twenty drops of the balsam of copaiva in a tumbler of beth root tea three times a day.

His diet should consist of boiled milk, and wheat flour, with a little nutmeg and cinnamon sprinkled in it.

He should avoid the use of tea and coffee, and take as little as possible of any kind of liquids.

This complaint in children, is often the result of habit, or carelessness, in not being made to avoid the urine, immediately before going to bed. As this disease, is often occasioned by a check of perspiration, this secretion should always be restored. Tepid bathing is beneficial, as well as laxatives. An adhesive, or strengthening plaster should also be applied to the small of the back and sacrum.

Some are in the habit of giving tincture of cantharides in this complaint, and formerly I administered it in a few cases, and in one case, it effected a cure.

CHAPTER X.

VOIDING BLOOD BY URINE. (*Hæmaturia.*)

DESCRIPTION.

This is rarely, if ever, a primary disease, but is commonly a symptomatic complaint, arising from some external injury by blows, bruises, or a fall; by some violent exertion, as lifting a heavy weight, jumping, or hard riding, or from a small stone lodged either in the kidney, or the duct for conveying the urine from thence to the bladder, and which, by its irregularity, or size, wounds or lacerates the surface of the part in which it is lodged, or through which it has passed.

If the blood proceeds immediately from the bladder, in consequence of a stone contained in it, it is generally accompanied by a sense of heat and pain at the bottom of the belly, and occasionally, much difficulty in making water. When a discharge of blood proceeds from the kidney or urinary ducts, and is occasioned by a rough stone descending from thence to the bladder, it is accompanied by an acute pain and sense of weight in the back, and a difficulty in voiding urine.

The deposit of clotted blood at the bottom of the chamber-pot in this complaint, and its staining linen of a red colour, will enable us to distinguish it from the high coloured urine attendant on many diseases. The voiding of bloody urine denotes danger, but it is particularly so when mixed with purulent matter, as it then points out that there is ulceration in some part of the urinary passages. Nor is the danger less when it has been produced by wounds or bruises of the kidneys. When it takes place in the course of any malignant disease, it shows a putrid state of the blood, and is often to be considered as a fatal symptom.

TREATMENT.

The treatment of this complaint likewise consists in giving stimulating diuretics and astruents.

The *urinary decoction* may be taken, according to directions given under the head of that preparation; likewise the *balsam copaiva*, as directed in the preceding disease.

I lately attended one case of this kind, which I cured by a strong decoction of *peach tree leaves*.

CHAPTER XI.

ONANISM, SELF POLLUTION, &c.

DESCRIPTION.

By this disease is to be understood an excessive discharge of the seminal fluid, either naturally or artificially. It is a very common practice among men and women, more particularly youth. It gives rise to a variety of symptoms, which are often unsuspected or overlooked by the physician, and by the friends of the patient.

The semen being the most vital fluid of the system, it is easily seen what the consequence must be when it is thrown off in an undue or excessive degree; and it is somewhat doubtful, whether a discharge of it in any manner, does not more or less injure the health or lessen the growth of persons. When it is retained in eunuchs and animals, they grow to a larger size, and obtain greater vigour and strength.

SYMPTOMS.

This disease produces febrile complaints, mania or mental derangement, dyspepsia or indigestion, hectic fever, and general debility. The more one indulges the practice, the greater the propensity for it. It causes a long train of complaints, tremors of the limbs, head-ache, restless nights, gleans or discharges from the urethra, pains of the system in different parts, the memory, judgment, and reason becomes impaired; discharge of semen, particularly at the thought or sight of women; pain in the breast and loins, cough and consumption, weakness in the back and genitals, sometimes fits of apoplexy, hypochondria and hysteria, and great despondency of mind.

TREATMENT.

1. The patient must abandon the practice immediately.
2. Neither see nor think of women more than is possible.
3. If there is nocturnal emissions of semen, let the patient take a few grains of the *diaphoretic powders* at bedtime.
4. Give the *diuretic drops* through the day.
5. Apply the *tincture of capsicum* to the back, loins, and parts of generation.
6. Let the *wine bitters* be taken.
7. Tepid bathing in salt water.
8. A cooling but nutritious diet, fresh raw eggs, oysters, milk, &c.
9. Reside in the country.

For further particulars on this important disease, consult a work by Tissot, lately translated from the French.

CLASS X.

REFLUENT DISEASES.

CHARACTER.

THIS class of diseases is directly the reverse of the preceding class, viz. *profluent diseases*. When any fluid is obstructed, or is returned back into the circulation, it constitutes a disease which comes under this head.

CHAPTER I.

RETENTION OF THE MENSES. (*Chlorosis.*)

DESCRIPTION.

It is well known that females from the age of twelve to sixteen, (or according to the climate,) begin to menstruate, and which constitutes a critical period in their lives, as health depends very much upon this discharge. It is liable from various causes to become obstructed at the period when it ought to appear, and when this takes place, it is attended with very painful or serious effects; and if nature is not assisted, the health is impaired, or the constitution undermined, inducing consumption, or some other complaint.

CAUSES.

The remote cause of this complaint, is most frequently suppressed perspiration, and it may arise in part, by an inactive and sedentary life, and such habits as are peculiar to the higher classes of society, particularly in cities and towns.

The proximate cause of it seems to be a want of power in the system, arising from inability to propel the blood into the uterine vessels with sufficient force to open their extremities, and to allow a discharge of blood from them.

SYMPTOMS.

Heaviness, listlessness to motion, fatigue on the least exercise, palpitations at the heart, pains in the back, loins, and hips, flatulency, and acidities in the stomach and bowels, costiveness, a preternatural

appetite for chalk, lime, and various other absorbents, together with many dyspeptic symptoms, usually attend on chlorosis.

As it advances in its progress the face becomes pale, and afterwards assumes a yellowish hue, even verging upon green, from whence it has been called green-sickness; the lips lose their rosy colour; the eyes are encircled with a livid areola; the whole body has an unhealthy appearance, with every indication of a want of power and energy in the constitution; the feet are affected with œdematous swellings; the breathing is much hurried by any vigorous exertion of the body; the pulse is quick, but small; and the person is apt to be affected with a cough, and with many of the symptoms of hysteria. Sometimes a great quantity of pale urine is discharged in the morning, and not unfrequently hectic fever attends.

In cases of a more chronic character, "there is a continued though variable state of sallowness, of yellowness, or icterode hue, of darkness, or of a wán, squalid, or sordid paleness of complexion, or a ring of darkness surrounding the eyes, and extending a little perhaps towards the temples and cheeks, and sometimes encircling the mouth, without tumidity, as well as without the palidness of the lips, already mentioned."

COMMON PRACTICE.

Bleeding, mercury, iron, salts, &c.

REFORMED PRACTICE.

As this disease proceeds from debility, it is evident that the great object to be fulfilled, will be to give tone and energy to the system, and if this debility has arisen from a sedentary life, the patient must begin immediately to exercise in the open air, and if practicable, to change her residence. I once had a case so very violent and protracted, that the patient often had fits resembling the apoplexy. I gave her medicine, and during the time she was taking it, she went to the sea-shore, bathed, took herb tea, and after a few weeks or months was entirely restored to health. The change of air, bathing, &c, appeared to contribute as much to the cure as the other means made use of. The tepid or warm bath should be used in preference to the cold.

The first medicine given, may be the pulverized *mandrake root*, combined with a little *cream of tartar*, and where the stomach is very irritable, our *common purgative* will be found very good. This, as well as other medicines, should be taken upon an empty stomach, and after it has been given, *peppermint tea* should be freely drank. After the exhibition of this purgative, which may be occasionally repeated, *gum aloes* may be taken, combined in such a manner as will prevent the piles. This medicine from its action upon the uterus through the medium of the rectum, is very useful in retention of the menses; and its benefit is much increased by combining it with other articles. Hence we have used it in the form of the *anti-dyspeptic* pill which answers the purpose very well. It is mild, gently laxative, and tonic. Two or three of these may be taken at bedtime, or as many as are sufficient to keep the bowels in a soluble state. During the use of these

pills, let the patient take the restorative cordial, as directed under that head. *Emenagogues*, or “forcing medicines” should not be used to bring on the menses, except there be a struggle or effort of nature to effect it, and this will be known by the periodical pains and pressing down about the hips and loins. When this happens, let the feet be bathed, and perspiration promoted by drinking freely of diluent teas, such as *pennyroyal*, *motherwort*, and *garden thyme*. Should considerable pains attend the complaint, eight or ten grains of the *diaphoretic powders* may be given, and *fomentations of bitter herbs* applied over the region of the womb.

The patient should be very careful not to expose herself to the vicissitudes of the weather; the feet or clothes should not be suffered to become wet; warm clothing should be worn, and particularly flannel. Chalybeate waters, such as Ballston and Saratoga, have been taken with success in this complaint.

The diet should be light, nutritious, and easy of digestion.

CHAPTER II.

SUPPRESSION OF THE MENSES. (*Amenorrhœa*.)

DESCRIPTION.

By this disease we understand a partial or total obstruction of the menses in women from other causes than pregnancy and old age. The menses should be regular as to quantity and quality; and that this discharge should observe the monthly period, is essential to health. When it is obstructed, nature makes her efforts to obtain for it some other outlet. When these efforts of nature fail, the consequence may be fever, pulmonic diseases, spasmodic affections, hysteria, epilepsy, mania, apoplexy, chlorosis, according to the general habit and disposition of the patient.

Any interruption occurring after the menstrual flux has once been established in its regular course, except when occasioned by conception, is always to be considered as a case of suppression.

A constriction of the extremities of the vessels of the uterus arising from accidental circumstances, such as cold, anxiety of mind, fear, inactivity of body, the frequent use of acids and other sedatives, &c. is the cause which evidently produces a suppression of the menses. In some few cases it appears as a symptom of other diseases, and particularly of general debility in the system. Herein there is a want of the necessary propelling force or due action of the vessels.

When the menstrual flux has been suppressed for any considerable length of time, it not unfrequently happens that the blood which should have passed off by the uterus, being determined more copiously and forcibly to other parts, gives rise to hæmorrhages; hence it is frequently poured out from the nose, stomach, lungs, and other parts, in such

cases. At first, however, febrile or inflammatory symptoms appear, the pulse is hard and frequent, the skin hot, and there is a severe pain in the head, back, and loins. Besides being subject to these occurrences, the patient is likewise much troubled with costiveness, colic pains, and dyspeptic and hysteric symptoms.

Our prognostic in this disease is to be directed by the cause which has given rise to it, the length of time it has continued, and the state of the person's health in other respects. When menstruation is suddenly suppressed, in consequence of cold, it may easily be restored by pursuing proper means; but where the suppression has been of long standing, and leucorrhœa attends, we ought always to consider such circumstances as less favourable, though not incurable.

COMMON PRACTICE.

Bleeding repeatedly, antimony, mercury, &c.

REFORMED PRACTICE.

It will be necessary in the treatment of this disease, to remove urgent symptoms if they are present. If the patient be in severe pain, give ten grains of the *diaphoretic powders*, and at the same time, let a strong infusion of *garden thyme* and *pennyroyal* be freely given. At the same time, let the feet be immersed in warm ley water, and rubbed well with flannel. If relief be not obtained in the course of an hour, or in a very short time, a strong decoction of bitter herbs should be thrown into a proper vessel, and the patient steamed fifteen or twenty minutes, as long as she is able to bear, or until perspiration is produced. And immediately after, let her be put in bed, covered warm, and the herbs be inclosed in flannel or muslin, and applied to the lower part of the abdomen or belly. This process will almost immediately relieve the urgent symptoms. After this, our next object will be, to regulate the menstrual discharge, by a proper course of strengthening medicine, and that recommended under the head of *chlorosis*, or a retention of the menses, may be taken with advantage. Inasmuch as this complaint, like the preceding, proceeds from debility, it is evident that this debility must be removed in order to effect a cure; and therefore that medicine and treatment which strengthens and invigorates the system, will invariably benefit the patient. The skin, stomach, and intestines, all seem concerned in the production of this disease, and hence our attention should be directed to a restoration of their proper offices. The stomach and bowels should be cleansed, and stimulated to a healthy action. Perspiration must be promoted, and in short every secretion and excretion of the system.

If the stomach is in a morbid condition, let an emetic occasionally be given, after which a dose of *mandrake*; both of which may be repeated as occasion requires. The patient may then take the following tonic bitters:

Take Prickly Ash Bark, 2 ounces.
Wild Cherry Tree Bark, 2 ounces.
Seneca Snake Root, 1 ounce.

Tanzy, 1 ounce.

Gum Socotorine Aloes, half an ounce.

Devil's Bet, 2 ounces.

Pulverize, and to every two ounces of the powder add half a pint of boiling water, and one quart of Holland gin. Half a wine-glass may be taken three or four times a day. This may be continued while it agrees with the patient, or as long as benefit is derived.

About once a month, there will generally be felt, more or less symptoms preceding a catamenial discharge. Considerable pain will be felt through the lower part of the abdomen, hips, and loins, showing that there is a strong effort or struggle of nature to return the menses. Our principal object when this occurs should be to aid her salutary efforts, as directed in the preceding complaint; the patient should sit over the steam of bitter herbs for ten or fifteen minutes, retaining the steam by means of a blanket, to concentrate it upon the lower part of the body. At the same time, the feet should be bathed, and *tanzy tea* freely drank. The abdomen should also be fomented, as before directed. It will not be necessary, however, to use these means except there is an obvious indication to return the menses.

It must be recollected, that when the patient labours under some other disease, there is such debility, that there is not superfluous blood sufficient to keep up the menstrual discharge; and in this case, our attention must be directed to the primary affection without any regard to such symptoms; and it is also very necessary to bear in mind, the fact, that the menses are often suppressed from pregnancy, and the physician will be applied to return them with a view to procure abortion. No man possessed of any principle, will ever be guilty of prescribing medicine in such a case with a view to return them. Such conduct would be very criminal, and an indictable offence. Great rewards or remuneration, are in such cases held out to the practitioner, but as he values his reputation, character, and conscience, let him never yield to the temptation.

By a proper attention, he can always discriminate between a suppression of the menses and pregnancy; and the principal diagnostic symptom is, that in the former complaint, there is a pain, or an affection of the head, attended with dizziness.

Lieutaud makes the following remarks upon this subject:

“Those who are desirous to cure this disease, ought strictly to enquire whether there be any suspicion of pregnancy; since numberless pseudo-virgins, or wanton little prostitutes are met with, who are impregnated, and by every art endeavour to conceal their very scandalous situation; under the semblance of curing this pretended disease, they desire to be bled in the saphœna, in hope of future abortion; so that even the most guarded are daily deceived.”

If the preceding treatment does not cure the disease, which will seldom if ever be found the case, if persevered in, the patient may take 15 or 20 grains of the *Euphor Ipecacuanha* about twice a week in a little molasses, and a tea made of the *green ozier*, may likewise be drank through the day. This will be found an excellent medicine.

I lately attended a case of Amonorrhœa, which had existed for two

years, and the abdomen had gradually acquired an enormous magnitude, much larger than a female in the last month of pregnancy, and after having tried all my ordinary remedies to return the menses I succeeded with the following treatment. I first gave a tea or infusion of the *Digitalis* or *Foxglove*, as directed under the head of *Hydrothorax*. In the next place, a *purgative* was ordered once or twice a week. During the same time the patient was ordered to drink freely of *parsley tea*, and the whole abdomen was rubbed twice a day with sweet oil, and as often with *white precipitate ointment*.

From the very time that the patient commenced this treatment, the belly began to subside; in a short time, the courses returned, she soon entirely recovered her health, and she has been well for many years. Having exhausted my skill in trying all ordinary remedies, I resorted to this last treatment, as an experiment, or as the last alternative, and never was a medicine more strikingly successful. The cure was a matter of astonishment to all who witnessed it. The abdomen was perfectly tense and hard, and appeared almost in a state of *schirrhus*. Of the *modus operandi* of the medicine, I must leave the reader to judge.

Some physicians have been very much in the habit of using the "Golden Tincture" made by adding spirits to *Black Hellebore* and logwood, till a saturated tincture was formed, and then giving one or two tea-spoonfuls three or four times a day.

A person informed me some years ago that a physician on Long-Island cured his wife of obstructed menses which had placed her life in the greatest jeopardy, and which other physicians could not remove. The following formula was used :

Take Tincture of Gum Myrrh.
do. Castor, equal parts.

Give a tea-spoonful three or four times a day.

Since writing the preceding remarks upon this complaint, I administered a dose of *Mandrake* for a bilious complaint to a young woman who had been afflicted with partial or deficient menses for many years, and which not only removed the symptoms for which it was given, but likewise returned the menses.

Since writing the above also, a gentleman has come a distance of forty miles to obtain relief for his daughter, who has been labouring under a spasmodic affection from suppressed or obstructed menses. Two physicians have attended her, and pursued the usual course of bleeding, &c. the effect of which has been (as I predicted) an aggravation of the complaint. The bleeding soon induced greater spasms and finally convulsions. I explained to him the nature of the disease, gave him my opinion that it proceeded not from repletion or excess of blood as his physician stated, but from an *unequal* circulation or an undue quantity thrown upon the brain. He then stated that her feet and legs were as cold as a dead person's, showing evidently a recession of blood from these parts to the head. After stating my views and treatment of the disease, he appeared forcibly struck with the difference between my views and other physicians, exclaiming, "How you Doctors do differ."

Dr. Tidd, with whom I studied, was in the habit of giving a preparation which has been attended with great success, and which I have formerly been in the practice of giving. He procured it from some person in the section of the country where he resided, who obtained great celebrity for removing this disease. It is made as follows :

Take Gum Myrrh, 4 ounces.
Flowers of Sulphur, 4 ounces.
Steel Filings, 4 ounces.
Loaf Sugar, 4 ounces.

Pulverize, and simmer all in a quart of wine, until the mass becomes nearly dry ; after which remove from the fire, and when dry, pulverize. Of this, let the patient take half a tea-spoonful two or three times a day. Some prefer taking the same quantity in the form of pills.

Under the treatment here laid down, I know not that I recollect a single instance of failure.

The following case occurred within my knowledge :—A young lady had laboured under almost a total suppression of the menses all her life, or for many years. She had tried almost every kind of medicine without receiving the least benefit, and her case appeared utterly hopeless. She was advised to apply to a woman who was very noted for curing this disease only. She called upon her, stated her symptoms, received a box of pills and took them according to her directions. The effect of which was, the natural return of the catamenial discharge, and perfect restoration to health. The father presented me with a few of the pills, which I found to be composed of about four parts of white turpentine gum, and one part of sulphate of iron, (green vitriol,) formerly called *sal mortis*. Two or three pills of the same, to be taken at a dose, three or four times a day.

CHAPTER III.

PAINFUL AND IMPERFECT MENSTRUATION. (*Dysmenorrhæa*.)

DESCRIPTION.

BESIDES the two deviations from the usual course of nature already mentioned, there sometimes occurs a third, viz. where menstruation, although not wholly suppressed, is nevertheless somewhat difficult, and accompanied with severe pains in the back, loins, and bottom of the belly.

This disease is owing to a weak action of the vessels of the uterus, or spasm of its extreme vessels, and is to be obviated by tonics, warm bathing, both topical and general, together with the use of anodynes, which should be employed as soon as the symptoms that denote its approach are apparent.

This complaint is a common, and generally an extremely harassing affection. It may occur at every period during the menstruation stage

of life; but it appears to be most common between the twentieth and thirtieth years of age, and in subjects of an irritable and sanguineous temperament. In many instances severe pains are experienced in the back, loins, and lower part of the abdomen, for five or six hours previous to the appearance of the menstuous evacuation. This, however, soon ceases, and an immediate aggravation of the torturing pain follows. Sometimes the catamenia begin to flow moderately with little or no previous pains; but in an hour or two they become suddenly arrested, at the same time that violent pains come on in the hips, hypogastrium, loins, back, and thighs, with a distressing sensation of forcing or bearing down in the pelvis. Occasionally a very slight menstrual discharge continues uninterruptedly for three or four days, accompanied throughout with extremely severe pains in the pelvis and lower portion of the abdomen; and in some rare instances, the catamenial evacuation, although attended with great suffering, is sufficiently copious and prolongs in its course, and may even exceed the regular duration and quantity of an ordinary healthy menstruation.

COMMON TREATMENT.

Mercury, &c.

REFORMED PRACTICE.

Since it is well known that a derangement in the uterine functions must generally proceed from a check of perspiration, astringing the minute ends of the uterine vessels, or in some manner deranging their functions, causing debility, &c. it will appear clear that our first attention must be directed to the skin. Cold appears to be the cause of the disease, and heat seems to remove it. Therefore when these periods of distress occur, let the patient sit over a strong decoction of bitter herbs, such as tansy, hoarhound, wormwood, catnip and hops, while a blanket is thrown round the waist of the patient to confine the steam to the lower parts. After the patient has been thus steamed, and the feet bathed, let the person be put into a bed warmly covered and diluent drinks given, such as tansy, thyme, pennyroyal, &c. At the same time, let fomentations of the same herbs inclosed in a flannel bag be applied to the abdomen as before directed.

This will produce perspiration and afford immediate relief; and when these distressing symptoms are removed, and the patient becomes comfortable, a course of treatment must be adopted to prevent a recurrence of these symptoms or to produce a natural flow of the catamenial discharge; and similar to that recommended under the two preceding complaints. A tea made of the bark of green ozier may be drank freely.

A writer on this subject thus remarks, "this case of painful menstruation deserves particular attention, because it impairs the health of patients by its present effects, and seems to render them less prolific in future. Dr. Fothargill has offered relief to several by the following process: let the patient have by her a few pills, consisting of opium, gr. i. each, made soft with a little of any kind of conserve. She is to take one of these pills the moment she finds the pain attending this discharge coming on. A pill may be taken every hour till the pain goes

off; and more than two of these pills will seldom be required; but it must be taken in such a quantity as to mitigate the pain. Let the patient keep either in or upon the bed, at least in a recumbent posture, drinking moderately of any diluting liquor, as the herb teas, weak whey, or thin broth. When the time is past, a course of chalybeate bitters, in small doses, may be continued, till within a few days of the return; and the belly should be kept open with some proper laxative. This excruciating pain seems to be spasmodic and to proceed from the extreme irritability of the uterine system."

The diaphoretic powders will be found very useful. Diet and exercise are important.

CHAPTER IV.

ANGINA PECTORIS.

DESCRIPTION.

An acute constrictory pain at the lower end of the sternum, inclining rather to the left side, and extending up in the left arm, accompanied with great anxiety. Violent palpitations of the heart, laborious breathings, and a sense of suffocation, are the characteristic symptoms of this disease. It is found to attack men much more frequently than women, particularly those who have short necks, who are inclinable to corpulency, and who at the same time, lead an inactive and sedentary life. Although it is sometimes met with in persons under the age of twenty, still it more frequently occurs in those who are between forty and fifty.

CAUSES.

It mostly depends upon an ossification of the coronary arteries, and then we can never expect to effect a radical cure.

SYMPTOMS.

In slight cases, and in the first stage of the disorder, the fit comes on by going up hill, up stairs, or by walking at a quick pace after a hearty meal; but as the disease advances, or becomes more violent, the paroxysms are apt to be excited by certain passions of the mind; by slow walking, by riding on horseback, or in a carriage; or by sneezing, coughing, speaking, or straining at stool. In some cases, they attack the patient from two to four in the morning, or whilst sitting or standing, without any previous exertion or obvious cause. On a sudden, he is seized with an acute pain in the breast, or rather at the extremity of the sternum, or breast bone, inclining to the left side, and extending up into the arm, as far as the insertion of the deltoid muscle, accompanied by a sense of suffocation, great anxiety, and an idea that its continuance or increase would certainly be fatal. In the first stage of the

disease, the uneasy sensation at the end of the sternum, with the other unpleasant symptoms, which seem to threaten a suspension of life by a perseverance in exertion, usually go off upon the person's standing still, or turning from the wind; but, in a more advanced stage, they do not so readily recede, and the paroxysms are much more violent. During the fit, the pulse sinks, in a greater or less degree, and becomes irregular; the face and extremities are pale, and bathed in a cold sweat, and, for a while, the patient is perhaps deprived of the powers of sense and voluntary motion. The disease having recurred more or less frequently during the space of some years, a violent attack at last puts a sudden period to his existence. Angina pectoris is attended with a considerable degree of danger; and it usually happens that the person is carried off suddenly.

TREATMENT.

During the paroxysms, considerable relief is to be obtained from fomentations, and administering powerful antispasmodics, such as the following mixture: laudanum, tincture of castor, ether. A tea-spoonful of this mixture taken occasionally, or when a paroxysm occurs. Tincture of *henbane* may also be tried.

The application of a mustard plaster to the breast is likewise attended sometimes with a good effect. As the painful sensation at the extremity of the sternum often admits of a temporary relief, from an evacuation of wind by the mouth, it may be proper to give frequent doses of carminatives, such as peppermint, carraway, or cinnamon water. Where these fail in the desired effect, a few drops of ol. aniseed, on a little sugar, may be substituted.

With a view of preventing the recurrence of the disorder, the patient should carefully guard against passion, or other emotions of the mind: he should use a light, generous diet, avoiding every thing of a heating nature; and he should take care never to overload the stomach, or to use any kind of exercise immediately after eating. Besides these precautions, he should endeavour to counteract obesity, which has been considered as a predisposing cause; and this is to be effected most safely by a vegetable diet, moderate exercise at proper times, early rising, and keeping the body perfectly open. It has been observed that angina pectoris is a disease always attended with considerable danger, and, in most instances, has proved fatal under every mode of treatment. "We are given, however, to understand, by Dr. Macbride, that of late, several cases of it have been treated with great success, and the disease radically removed, by inserting a large issue on each thigh."

Purgatives must be given, and perspiration promoted.

CHAPTER V.

NIGHTMARE. (*Incubus.*)

SYMPTOMS.

This unpleasant and distressing affection always attacks the person during sleep, and if this is profound, the first approach of the fiend is usually in the shape of a disagreeable and frightful dream. He perhaps supposes himself in great danger, or pursued by an enemy whom he finds it impossible to avoid. He frequently feels as if his limbs were confined and deprived of motion. After a time the uneasiness of the patient rapidly increases, he feels oppressed with a sense of weight on the chest, impressing him with the idea of some living being that is seated thereon, inspiring terror, impeding respiration, and paralyzing all the voluntary muscles. The sensation is highly distressing and painful, he becomes every instant more awake and conscious of his situation, he makes violent efforts to move his arms with the view of throwing off the recumbent weight, but all to no purpose; he moans sadly, his heart is sometimes affected with palpitations, but generally moves with additional velocity, the difficulty of breathing goes on increasing, the eyes are half open, and the countenance puts on a ghastly appearance.

If the person is left undisturbed, he generally lies in this state for two or three minutes, when all at once he recovers the powers of volition, upon which he either changes his position instantly, so as to awake himself thoroughly; or he jumps out of bed in a violent fright. When this is not done, the paroxysm or fit is very apt to return immediately or very soon, as there is an irresistible propensity to sleep, which, if yielded to, is very likely to be productive of another attack.

When the disease is fully established, some confusion of ideas, singing in the ears, spectral visions before the eyes will frequently remain for a time after being roused; and there will also be an unpleasant taste in the mouth, weight at the stomach; palpitations of the heart, and an accelerated pulse.

CAUSES.

The disease is most frequent among persons of a nervous temperament, and those who are studious or lead an inactive life. It seems principally to arise from indigestion, being usually accompanied with flatulency in the stomach and bowels, acid eructations, and costiveness. Nothing is more likely to produce an attack of the nightmare than going to bed soon after having eaten a hearty supper, and particularly of food of an indigestible or flatulent nature. It never takes place but when the person is lying on his back. Great anxiety, abstruse thinking, or any thing that oppresses the mind, may be considered also as exciting causes of this disease.

The nightmare has generally been looked upon as a trifling complaint, unattended with danger; but it is by no means improbable that

some of those persons who have been found dead in their beds, have been destroyed by it. Those who are subject to attacks of this disease should therefore have some person to sleep near them, that they may be immediately awoken on their moaning or making a noise during the fit, as the uneasiness goes off as soon as the patient is roused.

TREATMENT.

Persons subject to the nightmare should abstain from all kinds of food which is either difficult of digestion or apt to prove flatulent, particularly for supper; they should take regular and sufficient exercise throughout the day, court cheerful society, and avoid gloomy contemplations and intense study, with late hours.

On recovering from an attack of the nightmare, or being roused therefrom by an attendant, it may be advisable, if the patient seems distressed by flatulency or uneasiness at the stomach, to give him a draught consisting of an ounce of peppermint water, three drams of the compound tincture of cardamoms, and ten grains of the carbonate of potash, repeating it as the occasion may seem to require. If these medicines are not at hand, a table-spoonful of brandy or any other cordial may be substituted.

Persons who are young, and full of blood, if troubled with the nightmare, ought to take a purge frequently, use a spare diet, and exercise in the open air. The carbonate of potash, mixed with ale or porter, form an agreeable beverage for those liable to dyspeptic symptoms and incubus.

CHAPTER VI.

PALPITATION OF THE HEART. (*Palpitatio.*)

DESCRIPTION.

PALPITATION OF THE HEART, is sufficiently manifest, since it may be perceived by the touch, sight, and hearing; but the *essential* is hard to distinguish from the *symptomatic*; nor does the *genuine* cause of palpitation appear. Nevertheless it is reasonable to believe that it consists in the spasmodic contraction of this viscus, by which the sides of the ventricles struggle in the vain effort to expel the blood. That palpitation is allied to convulsion appears from this, and by its vehemence not only the voice and respiration are injured, but even the ribs are removed from their situation, or broken. The pulse, as the disease advances, is contracted, unequal and intermittent, vertigo comes on, with dimness of vision. The sick complain of flatulency, and of a certain twitching in the affected parts, &c. Sometimes Palpitation of the Heart or convulsive asthma is associated with dropsy of the breast, leucophlegmasiæ, &c. *Tremor of the Heart* is of another kind, which the unskilful rashly take for Palpitation; although it is principally dis-

tinguished from it by weak pulse, loss of strength, faintings, cold sweats, and other forerunners of death.

“Palpitation of the Heart takes its rise from plethora, or from a suppression of accustomed discharges of blood, from repulsion of customary eruptions, and closing of long continued ulcers, great joy, anger, fear, terror, solicitude, and other violent emotions of the mind, to say nothing of some odours, of imoderate exercise, &c. which may also occasion it. The cachectic, hypochondriac, scorbutic, and gouty are subject to it, as also hysterical and chlorotic persons. Lastly, it often invades valetudinarians, gluttons, and idlers, &c.

“Palpitation of the Heart proceeding from an accidental and slight cause, is void of danger, nor is the symptomatic thought always dangerous, so long as it is not the consequence of an incurable disease; lastly, there is some hope of health if it be caused by a general injury of the nerves. But it turns out otherwise if it be produced by an organic defect of the heart, which may be suspected when it recurs frequently, or continually afflicts the sick. By what kind of fault this prime organ of the circulation of the blood is affected, we can only conjecture, nor are physicians worth a straw, even when the nature of the disease is best known, since this organic defect admits of no cure.” [*Lieutaud.*]

TREATMENT.

This disease being often symptomatic of some other complaint, such as indigestion, it will be necessary to give such medicines as will remove the primary affection. The patient may take the elixer salutis, or compound tincture of senna, about half an ounce, every day or two, and also fifteen or twenty drops of the tincture of digitalis morning and night. Through the day he may also take an infusion or tea of the common cuckolds, which has proved exceedingly valuable in this disease. A plaster may be worn over the region of the stomach and heart. All violent emotions of the mind must be avoided; severe labour, exercise, &c. Also all heating or stimulating liquids or food.

CHAPTER VII.

JAUNDICE. (*icterus.*)

DESCRIPTION.

JAUNDICE is derived from the French, *jaunisse*, yellowness, of *jaune*, yellow, in medicine, a disease consisting in a suffusion of the bile, and a rejection thereof to the surface of the body, whereby the whole exterior habit is discoloured. Dr. Maclurg is of opinion, that the bile returns into the circulation in this disorder, by the course of the lymphatics. There is also a species of this disease called the black jaundice.

CAUSES.

The immediate cause of the jaundice is an obstruction of the bile in its passage into the duodenum. The remote or occasional causes are,

the bites of poisonous animals, as the viper, mad dog, &c. a coarse and bad diet; obstruction or repression of the necessary discharges. It is also brought on by a suppression of intermittent fevers, particularly of quartans, by astringents, and by violent passions of the mind, as grief, anger, &c. Violent vomits or purges will sometimes also bring on this disease, as will a sudden draught of cold water when the body is very hot. It is also a symptom in several kinds of fever, and pregnant women are very subject to it.

SYMPTOMS.

The jaundice first shows itself by a listlessness, and want of appetite; the patient becomes dull, oppressed, and generally costive. These symptoms have continued but a very short time, when a yellow colour begins to diffuse itself over the white of the eyes, and nails of the fingers; the urine becomes high-coloured, with the yellowish sediment; the stools are whitish or grey. The patient's skin is dry, and he generally feels a kind of itching or prickling pain over the whole body.

Sometimes the patient has a continual propensity to sleep, but in others there is too great watchfulness; and sometimes the pain is so great, that though the patient be sleepy he cannot compose himself to rest. The pain comes by fits; and all women who have had the jaundice agree, that they are more violent than labour pains. As the disease advances, the yellow colour becomes more and more deep; and even the internal membranes of the viscera, the bones, and the brain itself becomes tinged, as hath been shown from dissections, where the bones have been found tinged sometimes for years after the jaundice has been cured.

In like manner all the secretions are affected with the yellow colour of the bile, which in this case is diffused throughout the whole mass of fluids. The saliva, or spittle, becomes yellow and bitter: the urine excessively high coloured, in such a manner as to appear almost black; the blood itself is sometimes said to appear of a yellow colour when drawn from a vein; yet Dr. Heberden says, that he never saw the milk altered in its colour, even in cases of very deep jaundice. In process of time, the blood begins to acquire a tendency to dissolution and putrefaction, which is known by the patient's colour changing from a deep yellow to a black or dark yellow. Hæmorrhages ensue from various parts of the body, and the patients frequently die of an apoplexy; though in some the disease degenerates into an incurable dropsy; and there have not been wanting instances of some who have died of the dropsy after the jaundice itself had been totally removed.

If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but if, in old people, it continues long, returns frequently, or is complicated with others, it generally proves fatal either in itself, or in its consequences.

COMMON TREATMENT.

Mercury, Antimony, Salts, &c.

REFORMED PRACTICE.

If the stomach is much disordered, which is usually the case, we may commence the treatment of this disease by giving a mild portion

of the *emetic powders*, and after the operation and the stomach has become settled, give a portion of the pulverised *mandrake root*, combined with a little of the *cream of tartar* and *cloves* to prevent griping; and the repetition of these must depend upon the obstinacy of the complaint :

After these have been given, the patient should commence the use of the following preparation :

Take Yellow Root, or Golden Seal, 1 dram.

Bitter Root, 2 drams.

White Poplar Bark, 2 drams.

Capsicum, 1 dram.

Cover with boiling water, then add a pint of Holland gin. Of this let the patient take from half a wine glass, to a wine glass, morning, noon and night.

During the same time the following decoction may be taken :

Take the root of Dandelion,

Bark of Bayberry.

Bark of Bayberry Root.

Pound or bruise, make a decoction and drink freely.

Every night the patient may take two or three of the *anti-dyspeptic pills*, or sufficient to act as a laxative.

The tincture or infusion of blood root is also a valuable auxiliary in the cure of this complaint. The diet should be vegetables, light and nutritious. A raw egg may be taken every morning.

CLASS XI.

CONSTITUTIONAL DISEASES.

CHARACTER.

By this class we understand those diseases which are not confined to any particular organ, but more or less affect the whole system.

CHAPTER I.

SCURVY. (*Scorbutus.*)

DESCRIPTION.

THIS disease prevails chiefly in cold northern countries, especially in low damp situations, near large marshes, or great quantities of stagnating water. Sedentary people, of a dull melancholy disposition are most subject to it. It proves often fatal to sailors on long voyages, particularly in ships that are not properly ventilated, have many people on board, or where cleanliness is neglected.

It is not necessary to mention the different species into which this disease has been divided, as they differ from one another chiefly in degree. What is called the *land scurvy*, however, is seldom attended with those highly putrid symptoms which appear in patients who have been long at sea, and which, we presume, are rather owing to confined air, want of exercise, and the unwholesome food eaten by sailors on long voyages, than to any specific difference in the disease.

CAUSES.

The scurvy is occasioned by cold moist air; by the long use of salted or smoke-dried provisions, or any kind of food that is hard of digestion, and affords little nourishment. It may also proceed from the suppression of customary evacuations, as the *menses*, the hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness, bad clothing, the want of proper exercise, confined air, unwholesome food, or any disease which greatly weakens the body, or vitiates the humours.

SYMPTOMS.

This disease may be known by unusual weariness, heaviness, and difficulty of breathing, especially after motion; rottenness of the gums, which are apt to bleed on the slightest touch; a disagreeable breath; frequent bleeding at the nose; crackling of the joints; difficulty of walking; sometimes a swelling, and sometimes a falling away of the legs, on which there are livid, yellow, or violet-coloured spots; the face is generally of a pale or leaden colour. As the disease advances, other symptoms come on; as decay of the teeth, hæmorrhages, or discharges of blood from different parts of the body, foul obstinate ulcers, pains in various parts, especially about the breast, dry scaly eruptions all over the body, &c. At last a wasting or hectic fever comes on, and the miserable patient is often carried off by a dysentery, a diarrhœa, a dropsy, the palsy, fainting fits, or a mortification of some of the bowels.

TREATMENT.

We know no way of curing this disease but by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles.

If the patient has been obliged to breathe a cold, damp, or confined air, he should be removed, as soon as possible, to a dry, open, and moderately warm one. If there is reason to believe that the disease proceeds from a sedentary life, or depressing passions, as grief, fear, &c., the patient must take daily as much exercise in the open air as he can bear, and his mind should be diverted by cheerful company and other amusements.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables; as oranges, apples, lemons, limes, tamarinds, water-cresses, scurvy-grass, &c. The use of these, with milk, pot-herbs, fresh bread, and fresh beer or cider, will seldom fail to remove the scurvy of this kind, if taken before it is too far advanced; but to have this effect, they must be persisted in for a considerable time. When fresh vegetables cannot be obtained, pickled or preserved ones may be used; and where these are wanting, recourse must be had to vegetable acids. All the patient's food and drink should, in this case, be sharpened with cream of tartar, vinegar, or the muriatic acid.

These things, however, will more certainly prevent than cure the scurvy, for which reason sea-faring people, especially in long voyages, ought to lay in plenty of them. Cabbages, onions, goose-berries, and many other vegetables, may be kept a long time by *pickling*, *preserving*, &c. and when these fail, the acids recommended above, which will keep for any length of time, may be used. We have reason to believe, if ships were well ventilated, had got store of fruits, greens, cider, &c. laid in, and if proper regard were paid to cleanliness and warmth, that sailors would be the most healthy people in the world, and

would seldom suffer either from the scurvy or putrid fevers, which are so fatal to that useful class of men: but it is too much the temper of such people to despise all precaution; they will not think of any calamity till it overtakes them, when it is too late to ward off the blow.

In the course of the disease particular symptoms may arise, requiring a separate consideration. Pains of the belly are to be relieved by emollients and opiates; oppression at the chest and impeded respiration by mustard plasters; contractions of the hamæ and calves of the legs; by fomenting the part and by the application of emolient poultices and frictions; sponginess of the gums, and looseness of the teeth, by washing the mouth frequently with anti-septic and astringent gargles; and foul ulcers are to be cleansed and healed by washing them with soap and water, or the tincture of myrrh, and then dressing them with some kind of ointment, or poultice. In bad cases of ulceration the yeast poultice will be serviceable.

"Every body knows," says a writer, "how much easier it is to prevent than to cure any disease; but this is particularly true with respect to the scurvy. I have therefore recommended the most assured means of preserving our seamen from its formidable attacks. Vegetable and mineral acids are certainly the best correctives of the acrimony occasioned by the long use of salted provisions. These are one of the chief causes of the scurvy not only at sea, but on land also, where salted and smoke-dried meats are a favourite and very customary article of food. It appears that the scurvy is almost unknown to the natives of Canada, though they live entirely on animal food, but not salted; while the use of the latter never fails to produce the scurvy. Would it not then be worth while to make various experiments for preserving meat at sea without salt? Surely the resources of human invention are not exhausted. The absorbent and anti-putrescent properties of sugar are well known; but it might be deemed too expensive a seasoning. I must leave trials of this sort to persons of more leisure. It is enough for me to suggest the hint. I wish it may lead to a discovery of so much importance."

Since the above was written, this art has been discovered and practised.

"I have often seen," says a writer, "very extraordinary effects in the land scurvy from a milk diet. This preparation of nature is a mixture of animal and vegetable properties, which of all other is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humours, which seems to constitute the very essence of the scurvy, and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness flesh and fermented liquors, while milk is only deemed fit for their hogs.

"The most proper drink in the scurvy is whey or buttermilk. When these cannot be had, sound sider or spruce beer may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce-fir is likewise proper. It may be drank in the quantity of a pint twice a day. Tar-water may be used for the

same purpose, or decoctions of any of the mild mucilaginous vegetables; as sarsaparilla, marsh mallow roots, &c. Infusions of the bitter plants, as *tanzy*, *centaury*, &c. are likewise beneficial.

"A slight degree of scurvy may be carried off by frequently sucking a little of the juice of a bitter orange or a lemon. When the disease affects the gums only, this practice, if continued for some time, will generally carry it off. We would, however, recommend the bitter orange as greatly preferable to lemon; it seems to be as good a medicine, and is not near so hurtful to the stomach. Perhaps our own sorrel may be little inferior to either of them.

All kinds of salad are good in the scurvy, and ought to be eaten very plentifully, as spinage, lettuce, parsley, celery, radish, dandelion, &c. It is amazing to see how soon fresh vegetables in the spring cure the brute animals of any scab or foulness which is upon their skins. It is reasonable to suppose that their effects would be as great upon the human species, were they used in proper quantity for a sufficient length of time.

I have sometimes seen good effects in scorbutic complaints of very long standing, from the use of a decoction of the roots of *dock*. It is usually made by boiling a pound of the fresh root in six pints of water, till about one-third of it be consumed. The dose is from half a pint to a pint of the decoction every day. But in all the cases where I have seen it prove beneficial, it was made much stronger, and drank in larger quantities. [*Buchan.*]

CHAPTER II.

HEAT OF URINE. (*Ardor Urinæ.*)

DESCRIPTION.

FROM various causes, persons are afflicted with heat and scalding of the urine. It often proceeds from venereal, but may arise from various other causes; from inflammation of the kidneys, uterus, gravel, &c.

TREATMENT.

Cooling and mucilaginous drinks must be taken for this complaint, Half a tea-spoonful of the *diuretic drops* may be taken in half a pint of *spearmint tea*; also the mucilage of slippery elm bark should be taken.

A cooling and spare diet should be used, and all heating kinds of food or liquids avoided.

Buttermilk is an excellent article of diet.

This course will soon remove the complaint.

CHAPTER III.

EMACIATION OR WASTING OF THE BODY. (*Marasmus.*)

DESCRIPTION.

Sometimes the system begins to waste and decline without any evident cause, which constitutes a species of marasmus or consumption, and it is often difficult to trace the disease to any particular organ; the flesh wastes away, the strength declines, and the whole system is deranged.

TREATMENT.

Our object should be to ascertain the seat of the disease if possible, as it may lurk in some part of the system which it is quite difficult to detect; and therefore our inquiries should be very minute. When we can discover any specific disease which gives rise to the complaint, appropriate remedies must be prescribed; but if we are unable to detect the cause, then it must be treated on general principles. All the secretions and excretions must be regulated, the stomach, intestines and skin must be attended to, and brought into a healthy state.

CHAPTER IV.

GENERAL DEBILITY.

DESCRIPTION.

Persons are many times afflicted with universal languor, debility or great weakness without being able to trace it to any particular cause. They complain of a sense of sinking, particularly after a little exercise or fatigue. The appetite is generally good, and there is seldom any pain; nor is any particular organ seemingly deranged.

TREATMENT.

1. The stomach and bowels must be cleansed, the skin must be kept moist, and any particular symptoms attended to. I have found the use of the *restorative cordial*, invariably to benefit or cure this anomalous complaint. From half a wine glass to a wine glass may be taken three or four times a day. The bowels must be kept regular.

CHAPTER V.

MERCURIAL DISEASE AND SALIVATION.

DESCRIPTION.

The symptoms of this disease are too well known to need description, but they are detailed in the first part of this work under the head of the injurious effects of mercury. The general use of this mineral, has rendered this the most prevalent and destructive disease.—Scarcely an individual can be found among us, who has not, or does not suffer from the effects of this dreadful poison, and it is one of the most remarkable circumstances on record, that an article so evidently deleterious, which entails such a vast variety of complaints, should be given as medicine, when it possesses not the least power to remove disease whatever, any further than is produced by its purgative effects.

It is true, all patients are not killed who take it, but it so retards the efforts of nature to remove this poison, and the disease together, from the system, that she often struggles “like a cart beneath the sheathes,” to effect it, and very frequently if the constitution is not sufficiently strong, it kills the patient almost immediately, or at some subsequent period; or if it does not have this effect, it renders him a cripple or miserable for life, and perhaps it would be much better for him, if the physician had immediately put a period to his existence by a dose of arsenic or prussic acid; for, in this case, the constant state of torture, misery and wretchedness which attends the exhibition of this mineral, would be avoided. It penetrates into every avenue of the system, destroying the flesh and bones, fluids and mental powers. The person who takes it is liable to have his teeth drop into his porridge, his tongue inflamed or ulcerated, and perhaps protruding from his mouth, his flesh wasted away, saliva and blood flowing copiously from his mouth and gums, or perhaps the whole jaw bone in a state of rotteness or exfoliation: the patient is unable to chew or swallow; such a stench arises from his breath that his friends or attendants can scarcely approach his bed side—he is scarcely able to articulate a word—his stomach and bowels deranged—flesh and strength gone—he is racked and tossed with excruciating pains, unable to sleep or perhaps delirious, and the poor patient is now doomed to sink to an untimely grave, a victim of *quackery*, *empiricism* or *charlatanism*; and should the unfortunate person recover from the immediate effects of such worse than barbarous treatment, he is doomed to drag out a miserable existence; and all from the use of a deadly poison administered under the garb of medicine. A preparation or agent which I never yet could learn was ever capable of curing a single disease any further than arises from its action, as a purgative.

TREATMENT.

I was about to recommend the same treatment as for ordinary poisons, but this would not do, because it is much worse than most kinds, for

they can be immediately dislodged from the stomach by an emetic; but this subtle poison insinuates itself into every part of the system, and diseases the fluids so extensively, that its effects cannot always be so easily removed.

1. When the practitioner is called to the patient, if he is still using mercury in any form, he must order it to be immediately discontinued. A cooling gargle must be prescribed for the mouth, and as soon as the patient can swallow let him take cream of tartar and flowers of sulphur once or twice a day. This will check the salivation, and counteract the effects of the poison. The greatest suffering is experienced in consequence of taking cold after the use of it. When this happens, let perspiration be promoted. When the mercurial rheumatism is produced, and the joints stiff, let the *alterative syrup* be freely taken, and an infusion of *burdock seed* is also very good. A little sulphur may be mixed with venice turpentine spread upon linen, and laid upon the parts affected, and subsequently let a strengthening plaster be applied—but it is exceedingly difficult to remove the consequences attending such lamentable mal-practice.

CHAPTER VI.

Y A W S. (*Frambæsia*.)

DESCRIPTION.

Yaws is a disease peculiar to the negroes in the West India islands, said to be imported from Africa. It is propagated by contagion. It occasionally attacks white people, but they are not so liable to it as the blacks. Like the small pox, it only affects the person once during life.

SYMPTOMS.

The yaws are sometimes preceded by pains in the limbs which somewhat resemble those of rheumatism, and are particularly severe round the joints; these pains are attended with languor and debility, and frequently continue for many days without any further appearance of disease. After a time these precursory symptoms are succeeded by a degree of fever, sometimes attended with rigors, although in other instances the fever is slight and scarcely noticed.

For the most part the patient complains of headache, loss of appetite, and pains in the back and loins, which are rather increased towards evening. When these symptoms have continued for a few days, they are followed by an eruption of pustules more or less numerous, which appear in various parts of the body, but especially upon the forehead, face, neck, arm-pits, groins, pudenda, and round the anus. The eruption of these pustules is not completed over the whole body at one time, neither do they show themselves in any regular succession on the different parts; but while one crop is falling off, a fresh

one is making its appearance in another place. Every new eruption of pustules is usually preceded by a slight febrile paroxysm. On the first appearance of the pustules or pimples, they are not larger than a pin's head, but gradually increase until they attain the size of a sixpence, or even a shilling. The pustules are filled with an opaque whitish fluid, and when they burst, a thick viscid matter is discharged, which forms a foul and dense crust or scab upon the surface. From the larger kind of pustules there frequently arise red fungous excrescences of various magnitudes, from the size of a pea to that of a large mulberry: which fruit owing to their rough granulated surfaces, they somewhat resemble. These fungi, though they rise considerably above the surface of the skin, have but a small degree of sensibility; they never suppurate kindly, but discharge a sordid glutinous fluid, which forms an ugly scab round the edges of the excrescence, and covers the upper part of it, when much elevated, with a white slough. When these eruptions appear upon any part of the body covered with hair, the colour of the latter is gradually changed from black to white. In general the number and size of the pustules are proportioned to the degree of eruptive fever. When the febrile symptoms are slight, there are few pustules; but they are mostly of a larger size when the complaint is more violent and extensive.

The duration of the yaws is very uncertain, but is generally supposed to depend a good deal on the habit of body at the time of receiving the infection.

In some cases they arrive at their full size and maturity in the space of four or five weeks; but in others they have taken two or three months.

When no more pustules are thrown out, and when those already upon the skin no longer increase in size, the disease is supposed to have reached its height. About this time it happens on some part of the body or other, that one of the pustules becomes much larger than the rest, equalling the size of a half-dollar; it assumes the appearance of an ulcer, and instead of being elevated above the skin like the others, it is somewhat depressed; the surface is foul and sloughy, and pours out an ill-conditioned ichor, which spreads very much by corroding the surrounding sound skin: this is what is called the master or mother yaw. If proper attention be not paid to keep the surface of the ulcer clean, the matter becomes very acrid, and when near a bone sometimes affects it with caries.

When the excrescences appear upon the soles of the feet they are prevented from rising by the resistance of the thick hard epidermis, and give so much pain that the person affected is unable to walk. The fungi thus situated are called by the negroes in the West Indies, tubba, or crab yaws. They are sometimes so large as to cover a great part of the sole of the foot; at other times they are not larger than a shilling; like corns, they are frequently affected by different states of the atmosphere, but more particularly by rainy weather.

Where a judicious mode of treatment has been adopted, the yaws, although a very loathsome complaint, seldom proves either difficult or tedious of cure, and even in the worst of cases is never attended with

immediate danger: but where the eruptions have been repelled into the system by wrong applications, or mercury has been resorted to, the cure is often greatly protracted, and in some cases rendered uncertain. Where the disease has been suffered to pursue its course without any assistance, foul ulcers of a considerable extent are apt to be formed, which induce great debility, and often occasion a caries of the bones.

Thomas.]

COMMON TREATMENT.

Bleeding, blistering, mercury, &c.

REFORMED PRACTICE.

Having clearly ascertained the disorder to be the yaws, the negro ought to be sent immediately to some very private part of the estate, where he can have no possible communication with such as never had it. This precaution is by no means sufficiently attended to, as those who labour under the disease are too frequently suffered to associate and mix in friendly intercourse with other negroes, by which means it is propagated from one to another, instead of being eradicated.

During the eruptive stage of the disease we are to assist the efforts of nature in determining the noxious matter to the surface of the body by giving some mild *diaphoretic*, which may be washed down with about half a pint of the *decoction of sarsaparilla*. With these remedies the patient should make use of a warm bath about twice a week, confining himself at the same time to a vegetable diet. He ought to be comfortably and warmly lodged, and his system be invigorated by taking daily exercise proportioned to his strength.

In the second stage of the disease where the eruptions begin to dry off, it will be advisable to employ purgatives so as to produce an alterative effect. The alterative syrup may be used at the same time. Both are to be continued until the scabs become perfectly dry and fall off; at which period they are to be omitted, and then a *gentle purgative* should be given.

It has already been observed, that there usually remains one large eruption after all the rest have died away; and this, by degenerating into a foul ulcer, discharges an ichorous matter. The best application for its cure is the white ointment, and a suitable wash.

From the thickness of the cuticle in the feet, when the yaws appear there, the discharge is apt to be confined. When they break they are difficult to heal, often ulcerating the whole sole, and thereby rendering the person incapable of walking. A poultice of the *elm bark* is the best application in such cases.

Hard swellings of a very painful nature which do not suppurate, sometimes appear likewise in the soles of the feet as a consequence of the yaws, and occasion lameness. To remove them the patient should bathe his feet in warm water until the swellings become somewhat soft; they then should be touched by the *caustic potash*, which produces an eschar and sore, that is readily healed by dressing it with a *yeast poultice*.

CLASS XII.

LOCAL DISEASES.

CHARACTER.

By this class, we understand such diseases as are located more especially in some particular part of the body, but not affecting apparently any particular organ.

CHAPTER I.

LUMBAGO.

DESCRIPTION.

THIS Disease is a species of rheumatism which is more particularly concentrated in the small of the back, or the lower part of the spine. It causes great weakness or pain, and difficulty of stooping and often of walking.

TREATMENT.

The treatment of Lumbago is the same as that recommended for common rheumatism. The part may be bathed with the *tincture of capsicum* or Cayenne pepper, and if this does not relieve, the oil of *sassafras*; after which, let a strengthening plaster be applied.

CHAPTER II.

WORMS. (*Vermes.*)

DESCRIPTION.

THESE are chiefly of three kinds, viz. the *tania*, or tape-worm; the *teres*, or round and long worm; and the *ascarides*, or round and short worm. There are many other kinds of worms found in the human body; but as they proceed, in a great measure, from similar causes, have nearly the same symptoms, and require almost the same method of treatment as these already mentioned, we shall not spend time in enumerating them.

The tape-worm is white, very long, and full of joints. It is generally bred either in the stomach or small intestines. The round and long worm is likewise bred in the small guts, and sometimes in the stomach. The round and short worms commonly lodge in the *rectum*, and occasion a disagreeable itching about the seat.

The long round worms occasion squeamishness, vomiting, a disagreeable breath, gripes, looseness, swelling of the belly, swoonings, loathing of food, and at other times a voracious appetite, a dry cough, convulsions, epileptic fits, and sometimes a privation of speech. These worms have been known to perforate the intestines, and get into the cavity of the belly. The effects of the tape-worm are nearly the same with those of the long and round, but rather more violent.

Andry says, the following symptoms particularly attend the *solium*, which is a species of tape-worm, viz. swoonings, privation of speech, and a voracious appetite. The round worms called *ascarides*, besides an itching of the *anus*, cause swoonings, and tenesmus, or an inclination to go to stool.

CAUSES.

Worms may proceed from various causes; but they are seldom found except in weak and relaxed stomachs, where the digestion is bad. Sedentary persons are more liable to them than the active and laborious. Those who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally subject to worms. There seems to be an hereditary disposition in some persons to this disease.

SYMPTOMS.

The common symptoms of worms are, paleness of the countenance, and, at other times, an universal flushing of the face; itching of the nose (this, however, is doubtful, as children pick their noses in all diseases;) starting, and grinding of the teeth in sleep; swelling of the upper lip; the appetite sometimes bad, at other times quite voracious; looseness; a sour or stinking breath; a hard swelled belly; great thirst; the urine frothy, and sometimes of a whitish colour; griping, or colic pains; an involuntary discharge of saliva, especially when asleep; frequent pains of the side, with a dry cough, and unequal pulse; palpitations of the heart; swoonings, drowsiness, cold sweats, palsy, epileptic fits, with many other unaccountable nervous symptoms, which were formerly attributed to witchcraft, or the influence of evil spirits. Small bodies in the excrements resembling melon or cucumber seeds are symptoms of the tape-worm.

Says Buchan,—I lately saw some very surprising effects of worms in a girl about five years of age, who used to lie for whole hours as if dead. She at last expired, and upon opening her body, a number of the *teres*, or long round worms, were found in her intestines, which were considerably inflamed; and what anatomists call an *intus-susceptio*, or the involving of one part of the gut within another, had taken place in no less than four different parts of the intestinal canal.

TREATMENT.

Calomel is now principally used for the removal of worms: but this medicine, as has been frequently shown, is very dangerous to administer. Calomel or mercury is the basis or principal ingredient of most of the highly reputed nostrums for worms, such as worm lozenges, vermifuges, &c. The following preparation will be found very effectual in expelling different kinds of worms from the system.

Take Carolina Pink Root. (*Spigelia Maylandica.*)
 Alexandria Senna. (*Cassia Senna.*)
 Manna. (*Fraxinus Ornus.*) of each, half an ounce,

Bruise all, and add to the powder, one quart of boiling water. Let it stand a short time, in order to extract the strength of the articles—sweeten with molasses, and add a small quantity of milk.

For a child five years old, give a gill three or four times a day on an empty stomach, and if this does not purge, increase the dose until the effect is produced.

Worms sometimes ascend into the throats of children and choak them. This symptom may readily be removed by giving a little salts and water, and repeating it occasionally will often expel them, and always is a preventive.

This will be found a very valuable remedy for different kinds of worms, and even should none exist, it will cleanse the stomach and bowels, and prove very beneficial. I have tried various articles for worms, but find that this exceeds every other preparation.

When small worms infect the rectum, a weak infusion of tobacco used as an injection, will dislodge them, and the above medicine should likewise be given.

This treatment may also be used for the tænia, or tape-worm, but I cannot recommend it as a certain remedy, nor do I know any treatment that is always capable of removing this species of worms. I have given thirty or forty different agents, but none of which, have proved entirely effectual.

A person informs me that a small quantity of indigo cured one case in Kentucky. The male fern has also been highly extolled for it, but I cannot speak with any certainty of its effects.

One case was cured in one of the New-England states by a very curious process, and which, perhaps, is an infallible remedy, but which, to many, might be a very unpleasant one. The patient was suffered to get extremely hungry, after which, he was suspended over a boiling vessel of food with his mouth open in order that the worm might inhale the steam arising from it. This had the desired effect. The animal rushed from the stomach to the mouth to satisfy the cravings of hunger, and his head was clipt with a pair of scissors, and thus removed.

A young woman at Peekskill, New-York, was attended for dyspepsia. After her decease, worms were discharged from her mouth.

CHAPTER V.

HEAD-ACHE. (*Cephalalgia.*)

DESCRIPTION.

Head-ache is of two kinds, primary or symptomatic. It often arises from a morbid state of the stomach in consequence of an effusion of bilious matter. When this happens, it is termed sick head-ache. It often also arises from a determination of blood to the head, as well as many other causes.

TREATMENT.

In treating the head-ache we must first ascertain the cause of it. If it proceeds from the stomach, our attention must be directed to this organ, and it must be cleansed by a gentle emetic, or as a substitute, a purgative, and which must be occasionally repeated.

The feet must be often bathed in warm water to equalize the circulation, particularly when it arises from a determination of blood to the head as in incipient apoplexy.

When it proceeds from irritability of the nervous system, let nervines and anodynes be given, such as the *valerian*, *diaphoretic powders*, &c. Equal parts of *blood root* and *bayberry* pulverized may be used as a snuff.

If the pain at any time be very severe, let *mustard* plasters be applied between the shoulders and the bottom of the feet. Diet is very necessary in this disorder. It should be vegetable, cooling and light, and such as easily digests. Stewed fruit is very useful, as it tends to regulate the bowels which is very necessary.

Bathing the crown of the head every morning in cold water has proved a sovereign remedy for head-ache. Captain Snow informs me that he laboured under this complaint for a length of time, and several physicians prescribed bleeding for it. During his residence in the West-Indies—he applied to an elderly Scotch physician who objected to bleeding, and pronounced it ignorance, and recommended him to bathe his head every morning in cold water, which he did, and has continued for many years, and it has effected a perfect cure; and that no doubt by *equalizing* the circulation, and the sympathetic and healthy effect produced upon the stomach, upon which, he states, it always has a sensible effect.

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